

EVALUATING SOFTWARE FOR BIBLE TRANSLATION PROJECT
MANAGEMENT

A THESIS-PROJECT

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ABSTRACT

This thesis-project contributes to addressing the need for more rigorous management of Bible translation projects by evaluating software which can facilitate such management. Drawing from the field of project management, a model of Bible translation project management processes is proposed, and processes which are amenable to facilitation by software are identified and analyzed. This shapes the development of an assessment tool, which is used in the evaluation of particular software packages. Those software packages are chosen from industry-standard project management software and from programs commonly in use in Bible translation projects. The evaluation produces recommendations for Bible translation project managers who desire specialty software to facilitate all aspects of Bible translation project management and for those who want to augment the software they currently use in as simple a way as possible.

CHAPTER ONE

THE PROBLEM AND ITS SETTING

Management of Bible translation projects, in my experience, at best involves taking a bit of time once every year to decide which books to work on over the next twelve months, which workshops to attend, and how much it will all cost, submitting this information to a project funding system which facilitates finding funders to support these plans and budgets, and then tracking expenses and progress through regular reports on forms designed by the funders, according to the reporting schedule required by the funders. Translation team leaders can view this as busy-work, little more than hoops to jump through to get funding for their projects. Without funders in the picture, even less is involved: occasional decisions are made concerning which books to work on next, and attention is paid to finances only to the extent that spending does not exceed available funds.

Translation facilitators in SIL typically receive training in language program management which equips them to prepare initial plans on the basis of discussions with stakeholders and research into a project's context. Questions of scheduling and monitoring receive little attention: scheduling is done intuitively, and monitoring might involve simply filling out the funders' forms once every reporting cycle.

Project Management for Development Organizations (PM4DEV) bemoans, in international development work, the lack of use of “the basic tools[,] methods and processes that are commonly used in the project management profession, widely used in

the private and government sectors.”¹ They note that “for most organizations, project management has been reduced to the management of technical activities designed during the project proposal and little effort is done to plan the implementation, monitoring and evaluation of the project.”² This “causes additional costs, increases risks and reduces the trusts donors and stakeholders have [in] the organization.”³

The lack of rigorous project management in Bible translation has been noted as requiring attention. Of the ninety-five Bible societies that responded to a recent survey within the United Bible Societies (UBS), fifty-two reported a need for more capacity in Bible translation project management.⁴ The current UBS strategy document, “UBS Translation Roadmap,” calls for “robust project management.”⁵ Outside of UBS, translation agencies in the Wycliffe/SIL family of organizations have been promoting a model called the “Common Framework” for Bible translation projects. A summary document describing this approach includes “well-managed” Bible translation projects as an indicator of stewardship, one of the fundamental principles of this approach.⁶

In the Scripture Translations department at the Canadian Bible Society, we realized we needed a more robust approach to project management. Our department’s entire staff enrolled in a project management course and were introduced to the work of

¹ Project Management for Development, *Benefits of a Project Management Methodology* (PM4DEV, 2011), 1, accessed May 20, 2018, <https://www.pm4dev.com/resources/docman/pm4dev-articles/9-benefits-of-a-project-management-methodology/file.html>.

² PM4DEV, *Benefits*, 1.

³ PM4DEV, *Benefits*, 3.

⁴ Alexander Schweitzer, “Translation Roadmap” (keynote address at UBS Roundtable Exchange, Varadero, Cuba, June 4–8, 2018).

⁵ “UBS Translation Roadmap” (unpublished manuscript, United Bible Societies, February 14, 2018), PDF file, 9; see also 5.

⁶ “A Common Framework for Bible Translation (Executive Summary and Fundamental Principles)” (unpublished manuscript, The Seed Company, September 14, 2015), PDF file.

the Project Management Institute (PMI), and, in particular, to its standard for project management.

PMI was founded in 1969 to “advance the practice, science and profession of project management. ... It initiated a project in 1981 to develop the procedures and concepts necessary to support the development of project management as a profession.”⁷

The fruit of this project is the publication, *A Guide to the Project Management Body of Knowledge (PMBOK Guide)*, now in its sixth edition.⁸ PMI’s model for project management has been adopted by the American National Standards Institute as ANSI/PMI 99-001-2017, and by the International Standards Organization as ISO 21500:2012.⁹ In their guide to managing language-development programs, Marmor and Bartels characterize the PMI approach as “arguably the most important project management standard [and] a de facto international standard for project management.”¹⁰ I describe PMI’s approach in detail in chapter 3.

At the Canadian Bible Society, we are beginning to apply this approach to our Bible translation projects. In the process, we have realized that we need software tools to facilitate the management of our projects. Standard office software and the specialized software commonly in use in Bible translation projects cannot adequately support this approach to project management. In response to this need, the present thesis-project evaluates software for managing Bible translation projects.

⁷ Edward Chung, “A Short History of the PMBoK Guide Published by PMI,” June 7, 2017, accessed May 20, 2018, <https://edward-designer.com/web/short-history-pmbok-guide-pmi/>.

⁸ Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK Guide)*, Sixth Edition (Newtown Square, PA: Project Management Institute, Inc., 2017).

⁹ STS Sauter Training & Simulation S.A., *Comparing PMBOK® Guide 4th Edition, PMBOK® Guide 5th Edition and ISO 21500* (Lausanne, Switzerland: STS, 2014), 2, accessed May 20, 2018, http://sts.ch/themes/sts/root/files/7037_EN_Comparing_PMBOK_and_ISO.pdf.

¹⁰ Thomas Marmor and Eric Bartels, *Managing Language Programs: Perspectives, Processes, and Practices*, Pike Center for Integrative Scholarship (Dallas: SIL International, 2017), 76.

I proceed by discussing the biblical-theological rationale for Bible translation and for responsible project management in chapter 2. This is followed by a review of the relevant literature on project management, Bible translation project management, and the evaluation of project management software, in chapter 3. In chapter 4, I present an adaptation of the PMI approach for Bible translation projects, I discuss processes which can be facilitated by software, I develop a tool to use to evaluate software applications against relevant criteria, and I discuss the selection of software applications for evaluation from among recommended industry-standard programs and standard tools in use in Bible translation organizations. Chapter 5 discusses the results of the evaluation and gives recommendations concerning software for Bible translation project managers who want to apply an approach like PMI's standard for project management to Bible translation projects.

Project management is inherently task-oriented. Let me highlight here at the start the need for ethical issues to be given due consideration in the application of project management tools and techniques to Bible translation projects. Rather than wholesale adoption of an impersonal system from the world of business and industry, in line with the New Testament's call to love and serve one another,¹¹ the implementation of rigorous project management in Bible translation should vary from project to project and from organization to organization depending on the cultures and other particularities of the people involved.

¹¹ Mark 10:42–45; John 13:1–17, 34–35; Rom 12:10; 1 Pet 4:10–11.

CHAPTER TWO

BIBLICAL-THEOLOGICAL FOUNDATIONS

The purpose of this chapter is to explore the biblical-theological foundations for Bible translation and the responsible management of Bible translation projects. I begin by discussing how to build biblical-theological foundations for any belief or practice: what is the Bible? How do we approach it? And how do we bring it into conversation with contemporary questions? I then situate Bible translation as part of God's mission and conclude that the trajectory of Christian history and tradition and the present diversity of languages and cultures in the world demands that God's people continue to apply ourselves to the task of making God's word available in the languages of all peoples. Regarding responsible project management, I explore Scriptures related to stewardship and suggest that responsible project management is consistent with the value God places on the resources he has created and the role he calls his people to play with regard to those resources.

Hermeneutical Foundations

Theological speculation can be based on anything, but a theology worthy of the label *biblical* has to come from bringing the Bible into conversation with contemporary concerns. The Bible, as a collection of written texts, must be approached the same way all writing is approached: by a reader. In this case, the reader is me. I must be clear about that here at the start, because the meaning any reader gets from any text depends on the reader no less than on the text. We begin as ourselves, with certain preunderstandings about the text.¹ We allow our interaction with the text to modify our preunderstandings so

¹ William W. Klein, Craig L. Blomberg, and Robert L. Hubbard, *Introduction to Biblical Interpretation* (Dallas: Word Publishing, 1993), 114–115.

that the next time we approach the same text, we come at it with not exactly the same perspective as before. “When we allow the text to change some of our views as we interact with it and if we do so in light of good exegesis, then we actually can advance in our understanding of an author’s intentions for a particular audience as disclosed in a written text.”² In particular, as far as theology is concerned, we begin with certain ideas, allow the Bible to reshape those ideas, and engage the Bible again on the basis of those new ideas, over and over again. This is referred to as the hermeneutical spiral.³

The picture presented so far leaves out at least two important aspects of the biblical-theological interpretive situation: God, and the Christian community. The early church taught that “Scripture must be read and interpreted ‘in the light of that same Spirit by whom it was written.’ ... When a person reads Scripture and actually understands it ... that person has received a ‘visit from Jesus.’”⁴ Brian Daley suggests that for both fourth-century bishop Hilary of Poitiers and nineteenth-century English Protestant John Keble,

the discovery of ... holy things – which are Scripture’s actual *content* and *meaning* – requires from the reader a process of purification and an attitude of reverence that are not simply the product of academic learning but belong to the life of worship and faith. The key to this attitude, for both authors, seems to lie in the sense that it is God who speaks through the biblical author and text and that our own engagement with the text is nothing less than a personal encounter with the Divine Mystery.⁵

² Craig L. Blomberg, “The Historical-Grammatical Response,” in *Biblical Hermeneutics: Five Views*, ed. Stanley E. Porter and Beth M. Stovell (Downers Grove: IVP Academic, 2012), 138, emphasis and parenthetical comment removed.

³ Blomberg, “The Historical-Grammatical Response,” 138; Grant R. Osborne, *The Hermeneutical Spiral: A Comprehensive Introduction to Biblical Interpretation*, Rev. ed. (Downers Grove: IVP Academic, 2006). Osborne (22) points out that the spiral is actually “a cone, not twirling upward forever with no ending in sight but moving ever narrower to the meaning of the text and its significance for today.”

⁴ Aubrey Spears, “Preaching the Old Testament,” in *Hearing the Old Testament: Listening for God’s Address*, ed. Craig G. Bartholomew and David J. H. Beldman (Grand Rapids: Eerdmans, 2012), 402–403, quoting Jerome, *Comm. Gal.* 5.19–21, and Origen, *Hom. Isa.* 6, 3.

⁵ Brian E. Daley, “Is Patristic Exegesis Still Usable?” in *The Art of Reading Scripture*, ed. Ellen F. Davis and Richard B. Hays (Grand Rapids: Eerdmans, 2003), 80.

Moreover, as Daley's reference to "the life of worship and faith" reminds us, to a Christian, to read the Bible *as Scripture*⁶ is, in David Jasper's words, "to situate oneself within the entire history and order of the church":⁷ "our friends make us better biblical theologians, and our congregational worship makes us better biblical theologians, and the wisdom of saints makes us better biblical theologians."⁸

So I bring myself, as part of a Christian community and self-consciously in line with Christian tradition, to the Bible, expecting to encounter God there. What about me might affect how I read the Bible at this point in my life?⁹ My spiritual formation has taken place in Baptist, Roman Catholic, Evangelical Free, Christian & Missionary Alliance, Anglican, and Pentecostal churches in Canada, at three multi-denominational evangelical seminaries, and in sixteen years of service with Wycliffe Bible Translators, eleven of which were spent in East Asia, during which time my Christian community consisted of missionaries from diverse traditions and cultures. I was born in the 1970s, making me part of Generation X. I am thus more comfortable with postmodernism than the typical Baby Boomer, but I prefer only a responsible, ethical postmodernism that

⁶ I owe this wording and concept to R. W. L. Moberly, *Old Testament Theology: Reading the Hebrew Bible as Christian Scripture* (Grand Rapids: Baker Academic, 2013). See also Robert W. Jenson, "Scripture's Authority in the Church," in Davis and Hays, *Art of Reading Scripture*, 27–29.

⁷ See David Jasper, *A Short Introduction to Hermeneutics* (Louisville: Westminster John Knox Press, 2004), 36, for this description of the hermeneutic of second/third-century Irenaeus and Tertullian, which grounds this approach itself in the church's history and order.

⁸ A. K. M. Adam, "Poaching on Zion: Biblical Theology as Signifying Practice," in *Reading Scripture with the Church: Toward a Hermeneutic for Theological Interpretation*, ed. A. K. M. Adam, Stephen Fowl, Kevin J. Vanhoozer, and Francis Watson (Grand Rapids: Baker Academic, 2006), 34.

⁹ Despite Vanhoozer's claim that "True identity is not a function of ethnicity or any other kind of denominational label, including church denominations, but rather of one's relationship to Jesus Christ" (Kevin J. Vanhoozer, *Faith Speaking Understanding* (Louisville: Westminster John Knox Press, 2014), 131), it seems to me that identity is both complex and significant, hence the present paragraph.

insists that there is such a thing as misreading.¹⁰ I am a cisgender, heterosexual man,¹¹ married to a woman; we have three children. Ethnically, I am part of the majority culture in my home country, due to and with apologies for a recent history of colonialism. Having been raised in a culture that promoted caring for the environment and that saw lingering inequalities between men and women as unfortunate holdovers from a more patriarchal past, I am particularly sympathetic to ecological¹² and feminist¹³ approaches to the Bible, especially from a “believing”¹⁴ or “faithful”¹⁵ perspective. All this and more affected the beginnings of my interaction with the Bible years ago, and my changing circumstances and passage through life continue to influence and be influenced by my interactions with the text of the Bible, and with God, in community with other Christians.

Some presunderstandings which I bring to the Bible now, which have been developed and not contradicted by my interactions with the Bible and my life experiences, and which are relevant to the task at hand, are:

¹⁰ Kevin J. Vanhoozer, “The Reader in New Testament Interpretation,” in *Hearing the New Testament*, ed. Joel B. Green (Grand Rapids: Eerdmans, 1995), 315–318.

¹¹ Note how even the categories one uses to identify oneself reflect a particular place, time, and culture.

¹² Norman C. Habel, “Ecological Criticism,” in *New Meanings for Ancient Texts: Recent Approaches to Biblical Criticisms and Their Applications*, ed. Steven L. McKenzie and John Kaltner (Louisville: Westminster John Knox Press, 2013), 39–58; Christopher J.H. Wright, *The Mission of God: Unlocking the Bible’s Grand Narrative* (Downers Grove: IVP Academic, 2006), chap. 12.

¹³ Sandra M. Schneiders, “Feminist Hermeneutics,” in Green, *Hearing the New Testament*, 349–369; also Sharon H. Ringe, “An Approach to a Critical, Feminist, Theological Reading of the Bible,” in *A Feminist Companion to Reading the Bible: Approaches, Methods, and Strategies*, ed. Athalya Brenner and Carole Fontaine (Sheffield: Sheffield Academic Press, 1997), 156–163 and the other contributions to Brenner and Fontaine, *Feminist Companion*.

¹⁴ Mark A. Noll, *Between Faith and Criticism: Evangelicals, Scholarship, and the Bible in America*, 2nd ed. (Grand Rapids: Baker, 1991), 156–161.

¹⁵ Christopher M. Hays, “Towards a Faithful Criticism,” in *Evangelical Faith and the Challenge of Historical Criticism*, ed. Christopher M. Hays and Christopher B. Ansberry (Grand Rapids: Baker Academic, 2013), 1–23.

- that God exists, one God, the God of Abraham, Isaac, Jacob, Moses, David, the Prophets, and Christian communities throughout history;
- that God has revealed himself principally by visiting his own people and sharing our common humanity, as Jesus the Messiah;¹⁶
- that God has revealed himself in general through his creation in ways that all people can access;¹⁷
- that God has revealed himself less specifically than in Jesus, and more specifically than through his creation, in the texts that make up the collection we call the Bible;¹⁸ and
- that God continues to reveal himself and work in the world as his people attempt to live Christian lives, as Christian communities, for the sake of the world, abiding in him, by the power of his Holy Spirit.¹⁹

We can see the hermeneutical spiral at work already: my ideas about what the Bible is are informed both by my starting point as a Christian²⁰ and by my interaction with the Bible itself. The spiral will remain in the background through the rest of this study, but its presence must not be overlooked.

The Bible

Although God's revelation through other means, including as made known through the natural and social sciences, cannot be ignored, it is principally in interaction

¹⁶ Luke 1:68; John 1:14; Heb 1:1–2. “The first premise of Christian theology is that God *can* enter into the world because he *has* done so in Jesus Christ.” Vanhoozer, *Faith Speaking Understanding*, 90–91; emphasis original.

¹⁷ Ps 19:1–4; Rom 1:19–20.

¹⁸ Matt 1:22; Acts 1:16; Rom 15:4; 2 Tim 3:16–17; 2 Pet 1:20–21.

¹⁹ John 14:16–17; 15:5; Gal 2:20; Phil 2:13; 1 John 4:12.

²⁰ More specifically, as the type of Christian specified a few paragraphs earlier.

with the Bible that one develops a theology that can be called *biblical*. We must therefore now consider what the Bible is, and how we make use of it to develop a biblical-theological view of anything.

I have already referred to the Bible as a collection of texts. The Bible is the content of those texts, in their original languages (Hebrew, Aramaic, and Greek), as collected into the units Christians call the Old Testament and the New Testament.²¹ Those texts were written by people, for people, as members of particular cultures, in particular situations in history. Like all other texts, those that make up the Bible are products of the situations in which they were written. “The Bible is firmly situated in the ancient world in which it was produced.”²²

A process of editorial revision was most likely part of the original production of at least some of the Bible’s texts. A process of canonical selection was also at work; for example, various versions of Jeremiah and other Old Testament books were known to ancient Jews,²³ as were various stories involving the character Daniel which did not make it into Protestant Bibles,²⁴ along with, for example, Psalm 151, and entire books like 1 Enoch which were considered authoritative to at least some ancient Jews and Christians.²⁵

²¹ As part of the Christian traditions which shaped me, while recognizing that other Christian traditions include other books in their collections of Scripture, I consider the Bible to consist only of the Old and New Testaments, neither containing the books called Apocryphal or Deuterocanonical.

²² Peter Enns, *Inspiration and Incarnation: Evangelicals and the Problem of the Old Testament* (Grand Rapids: Baker Academic, 2005), Kindle edition, chap. 1, sec. A Way Toward Addressing the Problem: The Incarnational Analogy, para. 14.

²³ Emanuel Tov, *Textual Criticism of the Hebrew Bible*, 2nd ed. (Minneapolis: Fortress Press, 2001), 177–178.

²⁴ Bel and the Dragon and Susanna, for example, which are included in the book of Daniel in Catholic and Orthodox Bibles.

²⁵ James C. VanderKam, *An Introduction to Early Judaism* (Grand Rapids: Eerdmans, 2001), Kindle edition, chap. 3, sec. Scriptures, subsec. Groups of Authoritative Writings, para. 5; Jude 14–15. 1

The Bible is not merely these products of human authors, editors, and compilers, human cultures and situations; the Bible is also “God’s word written.”²⁶ This idea is shared by Christians of many traditions, from conservative Western evangelicals,²⁷ to Roman Catholics,²⁸ around the world,²⁹ and throughout history.³⁰ “Biblical discourse is both what humans have said through the Spirit and what God has said through humans.”³¹

Moving from the Bible to Theology and Practice

From the earliest phases of people writing down God’s word, God’s people have looked to the Scriptures to inform their thoughts and actions. The Old Testament laws functioned as specific instructions for ancient Israelites; the Hebrew prophets reminded them of their covenant obligations.³² In his preaching, Jesus often began with the Hebrew Scriptures, but he went beyond them as well:

“You have heard that it was said, ‘An eye for an eye and a tooth for a tooth.’ But I say to you, Do not resist an evildoer. But if anyone strikes you on the right cheek, turn the other also; and if anyone wants to sue you and take your coat, give your

Enoch remains in the canon of Scripture for present-day Oriental Orthodox churches in Ethiopia and Eritrea.

²⁶ Kevin J. Vanhoozer, “Imprisoned or Free? Text, Status, and Theological Interpretation in the Master/Slave Discourse of Philemon,” in Adam et al., *Reading Scripture with the Church*, 62. See 2 Tim 3:16 and 2 Pet 1:21 on the Old Testament specifically, and 1 Cor 14:37, 1 Thess 2:13, and 2 Pet 3:15–16 on the New Testament and the Apostles’s teaching as God’s word.

²⁷ See, e.g., International Council on Biblical Inerrancy (ICBI), *The Chicago Statement on Biblical Inerrancy* (ICBI: 1978), sec. A Short Statement, para. 2, accessed October 13, 2017, http://library.dts.edu/Pages/TL/Special/ICBI_1.pdf.

²⁸ Second Vatican Council, *Dei verbum [Dogmatic Constitution on Divine Revelation]* (1965), chap. 3, sec. 11, accessed October 13, 2017, http://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_const_19651118_dei-verbum_en.html.

²⁹ William A. Smalley, *Translation as Mission: Bible Translation in the Modern Missionary Movement*, The Modern Missions Era, 1792–1992: An Appraisal (Macon, GA: Mercer University Press, 1991), 1.

³⁰ Gerald Bray, “The Church Fathers and Their Use of Scripture,” in *The Trustworthiness of God: Perspectives on the Nature of Scripture*, ed. Paul Helm and Carl R. Trueman (Grand Rapids: Eerdmans, 2002), 159.

³¹ Vanhoozer, “Imprisoned or Free?”, 63.

³² Fee and Stuart refer to the prophets as “covenant enforcement mediators.” Gordon D. Fee and Douglas Stuart, *How to Read the Bible for All Its Worth*, 3rd ed. (Grand Rapids: Zondervan, 2003), 184.

cloak as well; and if anyone forces you to go one mile, go also the second mile. Give to everyone who begs from you, and do not refuse anyone who wants to borrow from you.”³³

Jesus’s approach to the Bible shows that we are not to follow its instructions verbatim: we are not to put ourselves into the shoes (sandals?) of the original audience and act in our circumstances as if we were them in their circumstances. We need instead to act in ways that are consistent with God’s character as revealed in Scripture and with his calling for us, and appropriate to our moment in history.

Jesus’s first followers continued on this trajectory, interpreting their Scriptures and the traditions and teachings about Jesus in new ways for new circumstances. For example, although the first Christians, being Jews, tended to follow Jewish laws and customs about food, Paul and others realized that this practice was not appropriate for the Gentile church. Paul wrote these instructions to the church at Corinth: “Eat whatever is sold in the meat market without raising any question on the ground of conscience, for ‘the earth and its fullness are the Lord’s.’ If an unbeliever invites you to a meal and you are disposed to go, eat whatever is set before you without raising any question on the ground of conscience.”³⁴

He wrote similar instructions to the church at Rome, including, “I know and am persuaded in the Lord Jesus that nothing is unclean in itself.”³⁵

³³ Matt 5:38–42. Scripture quotations herein are from the New Revised Standard Version of the Bible, unless otherwise stated. Note that Jesus wasn’t the first to go beyond the Hebrew Bible; see for example the relativizing of the sacrificial system in Isa 1:11–14, Hos 6:6, Amos 5:21–27, and Mic 6:6–8 and the discussion in Enns, *Inspiration and Incarnation*, chap. 3.

³⁴ 1 Cor 10:25–27. Paul nuances these instructions in what follows, but the basic point stands.

³⁵ Rom 14:14; see also the rest of Rom. 14, and Lamin Sanneh, “The Gospel, Language and Culture: The Theological Method in Cultural Analysis,” *International Review of Mission* 84 Nos. 332/333 (Jan/Apr 1995), 60–61.

Nothing in the Hebrew Scriptures told Paul it was ok to “eat whatever is set before you,” or that “nothing is unclean.” On the contrary, Deut. 14:1–21, for example, gives a fairly detailed list of what was and was not acceptable for a Jew to eat. It took the church reflecting on its new moment in history, the birth of the Gentile church, and the guidance of the Holy Spirit to discern an appropriate way forward.³⁶

I. Howard Marshall suggests that what we require to arrive at these applications of Scripture to new situations is “a mind nurtured on the gospel.”³⁷ “The continued emphasis in the New Testament on the need for Christians to think for themselves suggests that a wooden acceptance of scriptural teaching is inappropriate.”³⁸ Instead, in the context of Christian community, we rely on our prior study and Christian formation to guide our creativity as we seek to discern how God’s word speaks into new situations. God himself is a part of this process: “the Spirit works through the mind and study of the interpreter.”³⁹ Marshall gives the Jerusalem Council as an example of this process, as they introduce their practical-theological response to a new situation with the words “it has seemed good to the Holy Spirit and to us.”⁴⁰

The church continued with this approach to Scripture as history unfolded and new issues arose. Consider the Arian controversy and the church’s response in the fourth century Nicene (or Niceno-Constantinopolitan) Creed.⁴¹ Arius, “one of the most

³⁶ Jesus’s teaching in Mark 7:1–23 also points in this direction, but it took the gospel crossing into Greco-Roman culture to force the issue.

³⁷ I. Howard Marshall, *Beyond the Bible: Moving from Scripture to Theology* (Grand Rapids: Baker Academic, 2004), 70.

³⁸ Marshall, *Beyond the Bible*, 71.

³⁹ Osborne, *The Hermeneutical Spiral*, 436. John 16:13; 1 Cor 2:12; 2 Cor 4:6; Eph 1:17–19; Phil 1:9–11; Col 1:9–12; 1 Thess 1:5; 2:13; 1 John 2:20–27.

⁴⁰ Acts 15:28; Marshall, *Beyond the Bible*, 70.

⁴¹ The edition of 325 is called the Nicene Creed; its revision of 381 is the Niceno-Constantinopolitan Creed.

prestigious and popular presbyters” of Alexandria,⁴² essentially argued that Jesus was not God, was not coeternal with the Father. Alexander, bishop of Alexandria, disagreed, publicly, and removed Arius from his official church position. Arius sought the support of the public and of several other bishops, and there was soon “marching in the streets” and the danger of division in the church.⁴³ Emperor Constantine intervened, and ended up calling a council of bishops to meet in Nicea to settle the issue,⁴⁴ which they did in the document which developed into what is now known as the Nicene Creed. The Creed did not put an end to Arius’s teaching; its defeat took Athanasius, who had attended the council at Nicea as a deacon and who would later succeed Alexander as bishop of Alexandria, working to interpret *homoousios* ‘of one substance,’ a key word in the creed’s solution to the conflict, in such a way as to satisfy many of the Christians who had until then embraced neither side of the conflict.⁴⁵ This example relates to our developing hermeneutic in this way: “Athanasius improvised the concept of *homoousios* not out of the blue, but out of the canonical script [i.e., the Bible] and the conceptual resources at hand in his fourth-century context.”⁴⁶

In the present era, around the world, Christians continue to bring the resources of Scripture and tradition to bear on theological questions which arise from their contexts. Andrew Walls points out that “since [theology] springs out of practical situations, it is therefore *occasional* and *local* in character.”⁴⁷ He gives the example of Latin American

⁴² Justo L. González, *The Story of Christianity*, Volume 1: The Early Church to the Dawn of the Reformation, Rev. ed. (New York: HarperOne, 2010), 184.

⁴³ González, *Story of Christianity*, 185.

⁴⁴ The council had other business to attend to as well (González, *Story of Christianity*, 186–187).

⁴⁵ González, *Story of Christianity*, 190–192, 199–207.

⁴⁶ Vanhoozer, *Faith Speaking Understanding*, 190.

⁴⁷ Andrew F. Walls, *The Missionary Movement in Christian History: Studies in the Transmission of Faith* (Maryknoll, NY: Orbis Books, 1996), 10.

liberation theologians who are “stung by the fact that it has taken Marxists to point out things that Amos and Isaiah said long ago,”⁴⁸ that is, their theology comes out of bringing the Bible into conversation with their circumstances in ways that the church, to that point, had not done, because it had not found itself in quite the same situation. Likewise, “African theology ... will act on an African agenda,”⁴⁹ and will settle questions by “linking Scripture, old traditions, and the Church.”⁵⁰

I find the concept of *improvisation* helpful in thinking about how we are to think and act, in our circumstances, under the authority of the Bible (or, the authority of God as exercised through Scripture).⁵¹ First of all, the content of the Bible is not only propositions to be believed and imperatives to be obeyed. “How can an ancient narrative text be authoritative? ... It is one thing to go to your commanding officer first thing in the morning and have a string of commands barked at you. But what would you do if, instead, he began ‘Once upon a time ...’?”⁵²

One model which answers this question uses the metaphor of a play: consider the biblical story as a play in five acts, Creation, Israel, Jesus, Church, and New Creation.⁵³ We find ourselves as actors in possession of a partial script for this play:⁵⁴ we know the

⁴⁸ Walls, *Missionary Movement*, 10.

⁴⁹ Walls, *Missionary Movement*, 11.

⁵⁰ Walls, *Missionary Movement*, 11. See also Smalley’s discussion of Thai theology and Tamil hymns, among other examples (*Translation as Mission*, chap. 10).

⁵¹ N. T. Wright, “How Can the Bible be Authoritative?”, *Vox Evangelica* 21 (1991), 14ff, accessed October 13, 2017, http://biblicalstudies.org.uk/pdf/vox/vol21/bible_wright.pdf.

⁵² Wright, “How Can the Bible be Authoritative?”, 10. See also Wright, *Mission of God*, 52ff.

⁵³ That the Bible indeed tells a single story is by no means uncontroversial, but the idea of a biblical metanarrative can be defended. See, e.g., Richard Bauckham, “Reading Scripture as a Coherent Story,” in Davis and Hays, *Art of Reading Scripture*. Different numbers of acts and ways of dividing the story among the acts have been proposed; see Vanhoozer, *Faith Speaking Understanding*, 96–98 for discussion. The model originates with N. T. Wright, whose five-act schema is Creation, Fall, Israel, Jesus, and then the rest of the New Testament through the present day and until the Second Coming (“How Can the Bible be Authoritative?”, 19).

⁵⁴ The “partial script” is the Bible.

first three acts and the direction the story has moved in up to and through the beginning of the present (fourth) act, and we have some idea about how the play ends.⁵⁵ Our task is to improvise our parts in the present act,⁵⁶ in fidelity to the overall story, in continuity with the action and character development of the previous acts and scenes and in anticipation of the ending,⁵⁷ “to imitate, but not replicate.”⁵⁸ It would not do to repeat speeches or scenes from earlier in the play; it would not do to act “out of character” or to begin telling a different story altogether. “Imitation requires both fidelity and, in some cases, creativity if one is to continue the same pattern in a different situation.”⁵⁹

Westphal’s discussion of Gadamer’s response to a charge of relativism in interpretation in general applies here as well:

When a pianist plays Beethoven’s Appassionata Sonata ..., the pianist cannot play F-sharps where the score has D’s ... yet two interpretations of the sonata ... will be different from each other. ... We expect different interpretations, and while we may prefer one to the other, we do not conclude that only one is right and all the others wrong.⁶⁰

The “company of actors” (local church and/or para-church organization) of which I am currently a part may improvise our parts differently than another Christian community, but this only means there may be more than one legitimately biblical

⁵⁵ My mention that the story itself has direction is meant to call to mind the contributions to hermeneutical thinking by William Webb (e.g., “A Redemptive-Movement Model,” in *Four Views on Moving Beyond the Bible to Theology*, ed. Gary T. Meadors (Grand Rapids: Zondervan, 2009), 215–248).

⁵⁶ Jenson writes, “we are *in* the story that Scripture tells us” (“Scripture’s Authority,” 30; emphasis original). See also Wright: “the biblical worldview locates us in the midst of a narrative” (*Mission of God*, 64).

⁵⁷ Barry D. Jones, *Dwell: Life with God, for the World* (Downers Grove: InterVarsity Press, 2014), 46–47; N. T. Wright, *Simply Christian: Why Christianity Makes Sense*, Kindle edition (New York: HarperCollins, 2006), 236.

⁵⁸ Vanhoozer, *Faith Speaking Understanding*, 189.

⁵⁹ Vanhoozer, *Faith Speaking Understanding*, 189.

⁶⁰ Merold Westphal, “The Philosophical/Theological View,” Porter and Stovell, *Biblical Hermeneutics: Five Views*, 83.

response to a situation; it does not mean that all responses are equally valid.⁶¹ The Bible itself, the trajectory of church history, and the present theologizing of the church around the world all contribute to provide a means of evaluating any given improvisation.

Fitting participation requires what we might call dramatic consistency, *theodramatic* coherence, for the whole into which everything else fits is none other than the history of Jesus Christ, the concrete embodiment of the wisdom of God. Fittingness with what God has said and done must be the disciple's supreme criterion for discerning truth, goodness, and beauty alike ...⁶²

This, then, is how we build a biblical-theological foundation for ideas or actions: we interpret the Bible on the basis of sound exegesis, taking all relevant contexts into consideration while keeping an eye on our own presuppositions and allowing them to be challenged and modified, to understand what God was saying to the original audiences in their circumstances, and then we consider our present circumstances and apply our “minds nurtured on the gospel” to think and to act in fidelity to the biblical story, prayerfully relying on the Holy Spirit, as part of Christian communities, consciously in harmony with the church throughout history and around the world.

The Mission of God

We will now explore one reading of the script, one attempt to make sense of the story of Scripture. One theme which emerges from an exegetically-sensitive reading of the Bible is the mission of God. Barry Jones phrases it this way: “The rest of the story from the garden [of Eden in Gen 2–3] to the city [the New Jerusalem in Rev 21–22] is the

⁶¹ Kevin J. Vanhoozer, “A Drama-of-Redemption Model,” in Meadors, *Four Views*, 198. The pianist illustration, above, and the discussion of it immediately below, address Kaiser’s concern about “the authority and sufficiency of Scripture” in this approach (Walter C. Kaiser Jr., “A Response to Kevin J. Vanhoozer,” in Meadors, *Four Views*, 201).

⁶² Vanhoozer, *Faith Speaking Understanding*, 147; emphasis original. Christians are encouraged to act in ways that are “fitting” in, e.g., 1 Cor 14:40, Eph 5:3–4, Col 3:18, 1 Tim 2:10, and Titus 2:1.

story of the mission of God to rescue and renew his good but broken creation so that he might dwell with humanity and reign over creation in perfect peace.”⁶³

Chris Wright argues that this is more than just one theme among many: he claims that “mission is what the Bible is all about.”⁶⁴ More specifically, “the biblical worldview locates us in the midst of a narrative of the universe behind which stands the mission of the living God.”⁶⁵ That mission, God’s own mission, his purpose and the goal towards which he is working, is “blessing the nations through the agency of the people of Abraham”⁶⁶ in the context of the redemption of all creation.⁶⁷

Successive “acts” in the Bible’s five-act play show the involvement of God’s people in God’s mission. “In [the Bible’s] opening chapters we meet *humanity with a mission* on the planet that had been purposefully prepared for their arrival—the mandate to fill the earth, subdue it and to rule over the rest of creation (Gen 1:28). ... To be human is to have a purposeful role in God’s creation.”⁶⁸ Beginning in Genesis 12, the story of a particular people of God begins with the call of Abraham to “go ... and be a blessing.”⁶⁹ Israel’s history then unfolds with constant reminders that God’s people are God’s people not for their own sake, but for the sake of the world and all its nations.⁷⁰ The Gospels tell the story of Jesus, who is recorded as responding to the faith of a Gentile by announcing, “many will come from east and west and will eat with Abraham and Isaac and Jacob in

⁶³ Jones, *Dwell*, 44.

⁶⁴ Wright, *Mission of God*, 29.

⁶⁵ Wright, *Mission of God*, 64.

⁶⁶ Wright, *Mission of God*, 63; see also chap. 6. Gen 12:1–3; 22:16–18.

⁶⁷ Wright, *Mission of God*, chap. 12. Isa 11; 35; 65–66; Rom 8:18–22; 2 Pet 3:10–13.

⁶⁸ Wright, *Mission of God*, 65, emphasis original.

⁶⁹ Wright, *Mission of God*, 200–221. Gen 12:1–4.

⁷⁰ Wright, *Mission of God*, chap. 7. Exod 9:13–16; 19:5–6, Deut 4:6–8; 26:19; Josh 4:23–24; 1 Sam 17:46; 2 Sam 7:25–29, 1 Kgs 8:41–43, 60–61; 2 Kgs 19:19; Ps 22:27–28; 47:9; 67:1–2; 72:17; 86:9; 145:8–12; Isa 19:24–25; 25:6–8; 45:22–23; Jer 4:1–2; 33:6–9; Ezek 36:16–36; Zech 8:13.

the kingdom of heaven,”⁷¹ and who commissioned his first followers to “go ... and make disciples of all nations.”⁷² Jesus’s words were accompanied by actions, of course, and many of those actions spoke of the renewal both of God’s people and of all of creation.⁷³

Jesus Christ came into the world to save the world—to secure, by his death and resurrection, the dream of God, the dream of shalom. But he also came into the world to be the prototype of a new humanity, to show us what it means to live out our human vocation in this broken world as we wait for the dream of God to come in its fullness.⁷⁴

Luke 24:45–47 reports on a conversation Jesus had with two disciples who were walking from Jerusalem to Emmaus: “Then he opened their minds to understand the scriptures, and he said to them, ‘Thus it is written, that the Messiah is to suffer and to rise from the dead on the third day, and that repentance and forgiveness of sins is to be proclaimed in his name to all nations, beginning from Jerusalem.’”⁷⁵

Jesus understood the Old Testament to be saying that “repentance and forgiveness of sins is to be proclaimed in his [own] name to all nations.” Acts 2:8 reports Jesus’s final instructions to his first followers: “you will be my witnesses in Jerusalem, in all Judea and Samaria, and to the ends of the earth.”⁷⁶ The rest of the book of Acts shows the early church spreading the gospel message in exactly that sequence: in Acts 2, Peter preaches in Jerusalem and many people join the church; in Acts 8 the church is scattered by persecution “throughout the countryside of Judea and Samaria ... [and] those who were

⁷¹ Matt 8:11.

⁷² Matt 28:19. See also Luke 24:45–47; John 20:21.

⁷³ N. T. Wright, *Jesus and the Victory of God* (Minneapolis: Fortress Press, 1996), 191–196: the conditions from which Jesus healed people would have rendered them ritually unclean and excluded them from full participation in their communities. That he healed Gentiles (Matt 8:5–13/Luke 7:1–10; Matt 15:21–28/Mark 7:24–30; and maybe Matt 15:32–38/Mark 8:1–10/Luke 9:12–17) and a Samaritan (Luke 17:11–19) speaks to this theme of the inclusion of people of all nations among God’s people.

⁷⁴ Jones, *Dwell*, 99.

⁷⁵ Luke 24:45–47.

⁷⁶ Acts 2:8.

scattered went from place to place, proclaiming the word.”⁷⁷ The second half of the book of Acts tells the story of the church spreading the gospel into the Gentile world.

We discussed earlier the problem of treating a narrative like a command. Just because the Bible records a sequence of events, or tells a certain story, does not necessarily mean that that story is setting a precedent or placing demands for certain actions upon its readers. Fee and Stuart discuss this issue in relation to the book of Acts, and come to this conclusion: “The recurring motif that nothing can hinder this forward movement of the church empowered by the Holy Spirit makes us think that Luke also intended for his readers to see this as a model for their existence.”⁷⁸

Paul wrote of his commission in similar terms: he was to “bring about the obedience of faith among all the Gentiles.”⁷⁹ Paul also wrote about the redemption of all creation,⁸⁰ and the Christian life as one aspect of that.⁸¹ At the level of the individual Christian and Christian community, these two facets of the mission of God reinforce one another: evangelism and discipleship lead ever more people to live redeemed lives,⁸² and those lives beckon ever more people to follow Jesus.⁸³

The final act of the biblical play, the end towards which we orient our lives, sets before us a vision of people “from every nation, from all tribes and peoples and languages”⁸⁴ worshipping before God’s throne, and a vision of the new creation.⁸⁵

⁷⁷ Acts 8:1, 4.

⁷⁸ Fee and Stuart, *How to Read*, 120.

⁷⁹ Rom 1:5.

⁸⁰ Rom 8:19–23.

⁸¹ 2 Cor 5:17.

⁸² Rom 1:16.

⁸³ 1 Pet 2:12.

⁸⁴ Rev 7:9; see also Rev 5:9–10.

⁸⁵ Rev 21–22.

This survey of the biblical story, this consideration of the acts of the play which precede and follow our own, lead us to the conclusion that we, as God's people, are to join with God in his mission in the world today, spreading the message of God's kingdom and reinforcing our proclamation by living new creation lives.

The history of the spread of the church supports this conclusion:

The Christian church spread rapidly in the first centuries. By A.D. 400 it was strongly established in the eastern Mediterranean countries, especially those of Asia, adjacent areas of Europe and the coast of North Africa. It extended to a lesser degree also into other parts of Europe, to Ethiopia, and to Asian countries like Persia, the Arabian peninsula and India.⁸⁶

This rapid spread did not continue. "For several centuries Christian presence was concentrated (not exclusively, but principally) in Europe."⁸⁷ The modern missionary movement of the past couple centuries, and the earlier efforts of others such as the Jesuits and Moravians, were a response to this stall, and Christianity is now truly a global faith:

At present it seems that Europe and North America are the only continents where Christian faith and commitment is statistically receding. Everywhere else it is expanding. Sub-Saharan Africa provides a massive Christian population. In the Pacific there are now Christian nations of the sort that Europe used to have. In Latin America lies the single largest Christian culture group. The new Christian heartlands are in the south, in Africa, Latin America, parts of Asia, in the Pacific ...⁸⁸

The global church continues to be involved in the mission of God, spreading the faith from one culture to another.⁸⁹

⁸⁶ Smalley, *Translation as Mission*, 23.

⁸⁷ Walls, *Missionary Movement*, 256.

⁸⁸ Walls, *Missionary Movement*, 257.

⁸⁹ See, e.g., Lamin Sanneh, *Translating the Message: The Missionary Impact on Culture*, 2nd ed., American Society of Missiology Series 42 (Maryknoll, NY: Orbis Books, 2009), 204–205.

Bible Translation in the Mission of God

The spread of Christianity does not require a Bible in the vernacular. William Smalley put it this way: “the church existed before the New Testament or any part of it was written, and ... there were believers among the Hebrew peoples before the Old Testament existed.”⁹⁰ The Roman Catholic church spent much of its history relying on Latin for its Bible, but it still communicated the Christian message in vernacular languages.⁹¹ In this section we will explore biblical foundations for Bible translation; subsequent sections will consider Bible translation in the history of the church, and the present situation around the world which calls for continued effort in Bible translation.

Bible translation is not explicitly a part of the mission of God as sketched above, but it is consistent with it.⁹² We begin with the observation that communication *is* a part of God’s mission. God is a communicator, and God’s people are to communicate about God.

The Bible’s opening chapter introduces God as a communicator; it contains the verb ‘said’ with God as subject no fewer than eleven times.⁹³ God wants his people to know him, and, as we saw above, he wants all people to know him. God is portrayed as communicating verbally, and through ‘messengers’ to people throughout the rest of Genesis and in other parts of the Bible.⁹⁴

⁹⁰ Smalley, *Translation as Mission*, 217.

⁹¹ Smalley, *Translation as Mission*, 30.

⁹² Bryan Harmelink, “Translation as Transmission,” *Journal for Baptist Theology & Ministry* 12, no. 1 (Spring 2015), 20, accessed October 13, 2017, http://baptistcenter.net/journals/JBTM_12-1_Spring_2015.pdf.

⁹³ Gen 1:3, 6, 9, 11, 14, 20, 22, 24, 26, 28, 29.

⁹⁴ E.g., Gen 3:9–19; 4:9–12; 6:13–21; 7:1–4; 8:15–17; 12:1–3; 13:14–17; 15:4–5; 16:7–12; 25:23; 26:2–5; 28:13–15. References elsewhere in the Bible are too numerous to list; a sample is provided throughout this section.

The Bible reports that a body of writing about God's interactions with his people began to take shape during the Exodus.⁹⁵ Even before God gave his people Israel the laws they were to live by, he instructed Moses to write down a record of his work in their victory over Amalek.⁹⁶ Shortly afterwards, God gave them the law, which was written down, in part by God himself,⁹⁷ and in part by Moses.⁹⁸ Besides the law, Moses is also shown writing down historical information about the wilderness wanderings.⁹⁹

As Israel accumulated a record of their interaction with God and his instructions for them, they were commanded to pass this information on from generation to generation.¹⁰⁰ Their leaders especially were to know this information and let it guide their actions.¹⁰¹ Gradually the Bible came together, and, at the best of times, familiarity with its contents characterized God's people Israel.¹⁰²

These writings may have been directed primarily at God's own people, but, in line with the mission of God as sketched above, knowledge of God's interactions with people and of his laws were to impact other peoples as well.¹⁰³

By the time of Jesus, himself in some sense God's clearest communication to humanity,¹⁰⁴ the Jews had an established body of authoritative writing consisting at least

⁹⁵ This does not exclude the possibility of similar writings predating the Exodus.

⁹⁶ Exod 17:14.

⁹⁷ Exod 24:12; 31:18; 32:15–16; 34:1.

⁹⁸ Exod 24:4; 34:27–28; Deut 31:9.

⁹⁹ Num 33:2.

¹⁰⁰ Deut 6:6–9.

¹⁰¹ Deut 17:18–19; Josh 1:8; 8:31.

¹⁰² Neh 8:1–8.

¹⁰³ Exod 9:13–16; Deut 4:6–8; Josh 4:21–24; 1 Kgs 8:41–43.

¹⁰⁴ John 1:14, 18; Heb 1:1–2. Walls (*Missionary Movement*, 26–29) explores the incarnation as a biblical basis for Bible translation. See also Smalley (*Translation as Mission*, 165): “Translation of the Bible into a localized language ... is modeled after Christ's own incarnation.”

of the Pentateuch (the “Law”), the “Prophets,”¹⁰⁵ and some other writings such as the Psalms and Daniel.¹⁰⁶ Jesus was able to refer to passages of Scripture in his interactions with other Jews, expecting them to be familiar with the contents and to treat them as authoritative.¹⁰⁷ And he commissioned his followers to make disciples of all nations by “teaching them to obey everything that I have commanded you.”¹⁰⁸ He modeled this himself, as we saw in Luke 24, by pointing his followers to the Scriptures.

The church continued this practice of studying, preaching, and teaching from the Scriptures they had,¹⁰⁹ treating them as authoritative,¹¹⁰ and writing and collecting new writings about God, resulting in the Christian Bibles we have today. The Bible, as discussed above, is not only a human product. As “God’s word written,” it is a product of the God who communicates. “The Christian attitude to religious language places right at the heart of things the idea that people, especially ordinary people, should understand.”¹¹¹

There is thus a biblical basis for God’s people understanding and communicating the message of the Bible. Translation of the Bible from one language to another is not directly discussed in the Bible, but it is modeled in the multilingual nature of those writings (Hebrew for most of the Old Testament, Aramaic for portions of Ezra and Daniel, and Greek for the New Testament), and in the way New Testament authors, while

¹⁰⁵ In Hebrew Bibles, the “Prophets” includes the books of Joshua, Judges, 1–2 Samuel, 1–2 Kings, the major prophets Isaiah, Jeremiah, and Ezekiel, and the twelve minor prophets.

¹⁰⁶ VanderKam (*Introduction*, chap. 3, sec. Scriptures, para. 1) states that the Hebrew canon was most likely not closed until after the Second Temple period.

¹⁰⁷ Matt 5:17, 21, 27, 31, 33, 38, 43, etc. See Mark 2:26 and 12:26 for what appear to be conventional ways of referring to particular passages of Scripture.

¹⁰⁸ Matt 28:20.

¹⁰⁹ Acts 2:42 with reference to the apostles’s teaching; also Acts 17:11 shows early Christians studying the Old Testament, and 2 Pet 3:15–16 shows early Christian interaction with the then-nascent New Testament. See also Acts 2:14–36 and the numerous other places the New Testament quotes the Old Testament.

¹¹⁰ 2 Tim 3:16–17.

¹¹¹ Sanneh, “Gospel, Language and Culture,” 48.

communicating in Greek, would often cite the Septuagint instead of the Hebrew Bible.¹¹²

In the next section we explore how God's people throughout history have acted on this principle of understanding and communicating God's word by translating the Scriptures.

Bible Translation in the History of God's People

“Full scale translation of part of the Bible began, so far as we know, in the third century before Christ, when books of the Old Testament were translated into Greek.”¹¹³

At that time, Greek was the language of wider communication throughout much of the territory that Alexander the Great had conquered. In particular, it was the language that the Jewish community in Alexandria, where at least the Pentateuch was translated into Greek,¹¹⁴ would use at least in their interactions with their non-Jewish neighbours. The motivation for the translation, according to *Letter of Aristeas*, was for the Ptolemaic king to add to his library,¹¹⁵ but this translation, along with, eventually, the rest of the Septuagint,¹¹⁶ became “the Bible of the Jewish community of Alexandria,”¹¹⁷ and came

¹¹² E.g., Matt 12:21, which has the Gentiles hoping in God's name, which matches the LXX against the MT, which has “the coastlands wait for his teaching.” Note Bruce M. Metzger, *The Bible in Translation: Ancient and English Versions* (Grand Rapids: Baker Academic, 2001), 18: “when the Bible is quoted in the New Testament, it is almost always from the Septuagint version.”

¹¹³ Smalley, *Translation as Mission*, 1.

¹¹⁴ *Letter of Aristeas* 173. That the Jews of Alexandria generally understood Greek is evident from *Letter of Aristeas* 308, where the whole community listens to the translation being read and applauds it.

¹¹⁵ *Letter of Aristeas* 10–11. Metzger (*Bible in Translation*, 15) argues that the “real reason” for the Septuagint translation was that much of the Jewish community in Alexandria only spoke Greek and did not understand enough Hebrew.

¹¹⁶ Metzger, *Bible in Translation*, 16–17.

¹¹⁷ Harry M. Orlinsky and Robert G. Bratcher, *A History of Bible Translation and the North American Contribution*, Society of Biblical Literature Centennial Publications (Atlanta: Scholars Press, 1991), 4.

to be used much more widely by the first century,¹¹⁸ sometimes alongside other Greek translations of the same books.¹¹⁹

During this same period,¹²⁰ the spoken language of the Jewish community in Palestine, and in parts of the diaspora to the north and east, was Aramaic. Jews also began translating their Scriptures into Aramaic, because that was the language more of them understood.¹²¹ God's people valued understanding God's word, and if understanding required translation, then translations were produced.

The first Christians were Jews, and understanding God's word remained a strong value for them. As the church took root in more and more Greek-speaking areas, and given Greek's status as a language of wider communication especially in the Asian part of the Roman Empire, the authors of the New Testament knew they could count on their audiences understanding Greek, and so that is the language in which they wrote. This was not an instance of translation, but, like translation, it was a case of prioritizing clear communication.

One significant difference between Christianity and Judaism is Christianity's ability and drive to cross cultures. "The gospel demands frontier crossing for its wider transmission."¹²² The gospel crossed first from Jewish to Greco-Roman culture, and as

¹¹⁸ Josephus, for example, writing in Rome for a Gentile audience in the late first century, quotes the Septuagint (Orlinsky and Bratcher, *History*, 6). As mentioned above, the New Testament authors often quoted the Septuagint as well. And copies of Greek versions of Old Testament books have been found at Qumran (VanderKam, *Introduction*, chap. 3, sec. Scriptures, subsec. Versions, para. 2).

¹¹⁹ On two ancient Greek versions of Esther, for example, see Kristin De Troyer, "Septuagint and Gender Studies: The Very Beginning of a Promising Liaison," in Brenner and Fontaine, *Feminist Companion*, 336, 338–343.

¹²⁰ Even before Alexander, specifically, since the Babylonian exile in the sixth century B.C. That significant portions of Ezra and Daniel are in Aramaic is one piece of evidence for widespread Jewish familiarity with Aramaic in this period.

¹²¹ Orlinsky and Bratcher, *History*, 3; also Harmelink, "Translation as Transmission," 22.

¹²² Sanneh, *Translating the Message*, 34.

the church became increasingly Greco-Roman, it made sense for its literature to be written in Greek.

The church continued to cross cultures. The gospel had taken root early in Syria,¹²³ and both the New and Old Testaments were translated into Syriac by around the end of the second century.¹²⁴ Latin and Coptic versions followed around the same time or shortly thereafter.¹²⁵

In the fourth century, bishop and missionary Ulfilas brought Christianity to his own people, the Goths, and translated the Bible into Gothic, having first needed to create an alphabet for the language.¹²⁶ Around the same time, Gregory the Illuminator likewise brought Christianity to his native Armenia, where conversion of the king led to Armenia becoming the first officially Christian state.¹²⁷ In the early fifth century, an Armenian alphabet was created, and the Bible was translated into Armenian.¹²⁸ Georgian, Ethiopic/Ge'ez, Nubian, Arabic, Sogdian, and (Old Church) Slavonic versions followed over the next few centuries as Christianity continued to spread.¹²⁹

This is the pattern we see: Christians, spurred on by Scripture and the church's missionary character and tradition, bring Christianity across cultural lines; the church is established among more and more peoples; the church recognizes its need for the Bible, and so it translates it, Old and New Testaments, first creating alphabets for previously

¹²³ Acts 11:19–26.

¹²⁴ Orlinsky and Bratcher, *History*, 8; Metzger, *Bible in Translation*, 26–27. The chronology given by Harmelink (*Translation as Transmission*, 23) was useful in developing this section.

¹²⁵ Metzger, *Bible in Translation*, 30, 36.

¹²⁶ Metzger, *Bible in Translation*, 38.

¹²⁷ Metzger, *Bible in Translation*, 40. González (*Story of Christianity*, 254–255) notes that the (Syriac-speaking) kings of Edessa and most of their subjects embraced Christianity before Armenia did.

¹²⁸ Metzger, *Bible in Translation*, 41.

¹²⁹ Metzger, *Bible in Translation*, 43–51.

unwritten languages as necessary.¹³⁰ “Bible translation as a process is ... a concretization of the commission which Christ gave his disciples. Perhaps no other specific activity more clearly represents the mission of the Church.”¹³¹

Ever since the conflict concerning Jewish and Gentile Christians which was background to a substantial part of the New Testament, the missionary issue has not been whether or not the gospel should be translated, but which translated language to use. Once the church moved out from Jerusalem in the first century the gospel was almost never expressed except in translated form.¹³²

Bible Translation Today

“Ever since the Reformation itself the central Protestant vision has been that all people should hear, and read. Many missionaries of the Orthodox church have subscribed to that vision as well, and more recently the Roman Catholic church has come to the same position.”¹³³

According to Wycliffe Global Alliance,¹³⁴ as of 2015, at least one book of Scripture exists in over 2900 out of the approximately 7000 languages spoken in the world. Over 1.5 billion people still do not have the whole Bible available in their first language. Bible translation is currently taking place in over 2200 languages.

Wycliffe Global Alliance consists of over 100 organizations from all around the world. The United Bible Societies is likewise a global network of organizations. Both networks are multicultural; moreover, the Bible societies are particularly inclusive of

¹³⁰ Admittedly, this pattern unfolded in the context of the Roman Empire and its legacy, with Latin increasingly playing a primary (and eventually, exclusive) role in the Western church. This and other factors kept the rate of translations into new languages slow until the modern missions movement began at the end of the eighteenth century; see Smalley’s statistics (*Translation as Mission*, 34).

¹³¹ Walls, “Missionary Movement,” 28.

¹³² Smalley, *Translation as Mission*, 154.

¹³³ Smalley, *Translation as Mission*, 158–159.

¹³⁴ Wycliffe Global Alliance, “Scripture & Language Statistics 2015,” accessed October 13, 2017, <http://www.wycliffe.net/en/statistics>. Cf. United Bible Societies, “Global Scripture Access,” accessed October 13, 2017, <https://www.unitedbiblesocieties.org/translation/global-scripture-access/>.

diverse Christian traditions: “Beginning with Protestant churches primarily, that united effort has over time been extended to include the Eastern churches, the Roman church in many areas, and recently the isolated Chinese church.”¹³⁵ The church around the world is involved in Bible translation today,¹³⁶ and the statistics above demonstrate the need for this work to continue.

Responsible Management

That the work of Bible translation should be carried out responsibly, with due attention given to the use of time, personnel, and material resources, follows from consideration of certain aspects of God’s character and from Scripture passages referring to orderly work and responsible stewardship of resources. 1 Corinthians 14:33 states that “God is not a God of disorder,” and 14:40 instructs that all parts of corporate worship gatherings “be done decently and in order,” showing the value God places on management and orderliness.¹³⁷

The Bible describes a handful of projects and their management. Genesis 1 portrays God carrying out his project of creation in an orderly way, performing certain tasks on certain days. The correspondence between the events of days one and four, two and five, and three and six, suggests God working according to a plan, as opposed to haphazardly or intuitively. Genesis 6:14–16 shows God giving Noah a plan for the ark, and Exodus 25:9 and 40 and Exodus 26:30 refer to God showing Moses a plan for the

¹³⁵ Smalley, *Translation as Mission*, 166.

¹³⁶ But see Punt’s comments on the continuing disproportionate influence of Westerners in Bible translation projects (Jeremy Punt, “Translating the Bible in South Africa: Challenges to Responsibility and Contextuality,” in *Bible Translation on the Threshold of the Twenty-First Century: Authority, Reception, Culture and Religion*, ed. Athalya Brenner and Jan Willem van Henten (Sheffield: Sheffield Academic Press, 2002), 115–116).

¹³⁷ This section is based on James Metcalf, “Project Management Principles for Successful Projects,” *Canadian Council of Christian Charities Bulletin* 2018.2 (April 2018): 20–23.

construction of the tabernacle and its associated items. Nehemiah 1–6 show Nehemiah managing the project of rebuilding Jerusalem’s wall by relating to stakeholders,¹³⁸ making responsible use of resources by having different people work on different portion of the wall,¹³⁹ implementing a change in project scope and the assignment of resources in response to a changed situation,¹⁴⁰ and successfully completing the project.¹⁴¹

Jesus promotes good stewardship in the Parable of the Talents,¹⁴² and promotes a clever response to a difficult situation in what might otherwise look like irresponsible stewardship in what the NRSV refers to as the “Parable of the Dishonest Manager.”¹⁴³

It was pointed out above that historical precedent is a fitting way to test an interpretation of Scripture. The suggestion that responsible management of Bible translation projects is justified biblically and theologically finds support in Aristeas’s story of the translation of the Septuagint. That story describes the translators carrying out several prescribed tasks, day after day, working the same hours each day they worked, and presenting their finished product to the project’s stakeholders after its completion.¹⁴⁴

Conclusion

The hermeneutic sketched above calls for the church in each generation and each culture to study the Bible, recognize its own place in the Bible’s story, and act with creativity in fidelity to that story in ways that are appropriate to each situation, in harmony with the church throughout history and around the world. We have explored the

¹³⁸ Neh 1:3, 2:2–9, 2:17–18.

¹³⁹ Neh 3.

¹⁴⁰ Neh 4.

¹⁴¹ Neh 6:15.

¹⁴² Matt 25:14–30/Luke 19:11–27.

¹⁴³ Luke 16:1–13.

¹⁴⁴ *Letter of Aristeas* 301–312.

biblical basis for Bible translation and its place in the mission of God in the life of the church from its beginnings and through time as Christianity spread across cultural boundaries. The church today remains appropriately involved in Bible translation. The church's longstanding commitment to making its message comprehensible, and the present global diversity of languages, call us to continue making the Bible available in the languages people understand best. In line with biblical principles and historical precedent, "as good stewards of the time, resources, funds, and knowledge that God has given to us,"¹⁴⁵ the work of Bible translation should be managed responsibly.

¹⁴⁵ Metcalf, "Project Management Principles," 21.

CHAPTER THREE

LITERATURE REVIEW

This is a review of the literature relevant to evaluating software to facilitate the management of Bible translation projects. I interact with literature concerning the discipline of project management in general and the Bible translation literature on the planning and management of Bible translation projects. I also survey discussions about software for project management and its evaluation.

The Discipline of Project Management

“As a formal managerial discipline, project management is still relatively young.”¹ In the late nineteenth and early twentieth centuries, industrial work began to be studied, and tools for improving the management of work, such as the Gantt chart,² began to be developed.³

From the 1960s through the 1990s, the discipline of project management developed as industry worked to solve problems such as those related to scheduling, teamwork, risk management, and coordination.⁴ The Project Management Institute (PMI) was founded in 1969 to “advance the practice, science and profession of project

¹ Aaron Shenhar and Dor Dvir, “Project Management Evolution: Past History and Future Research Directions,” paper presented at PMI Research Conference: Innovations, London, England, July 11–14, 2004 (Newtown Square, PA: Project Management Institute, 2004), sec. On the History of Project Management, para. 1, accessed May 20, 2018, <https://www.pmi.org/learning/library/project-management-evolution-research-directions-8348>.

² A Gantt chart lists project tasks vertically and a timeline horizontally, indicating the durations of the tasks with horizontal bars placed along the timeline. Resources assigned a task may be indicated along the right side of that task’s row.

³ Shenhar and Dvir, *Project Management Evolution*, sec. On the History of Project Management, para. 1; Thomas Marmor and Eric Bartels, *Managing Language Programs: Perspectives, Processes, and Practices*, Pike Center for Integrative Scholarship (Dallas: SIL International, 2017), sec. 2.4.3 and 4.2.

⁴ Shenhar and Dvir, *Project Management Evolution*, sec. On the History of Project Management, para. 7–10.

management.”⁵ In the 1980s, PMI began a project “to develop the procedures and concepts necessary to support the development of the project management as a profession.”⁶ Their work resulted in the publication *A Guide to the Project Management Body of Knowledge*, commonly referred to as the *PMBok Guide*.⁷

The current sixth edition of the *PMBok Guide* models the “project life cycle” as a series of “project phases.”⁸ Certain “project management processes” are appropriate to each phase.⁹ The 49 processes are grouped into five “process groups” (Initiating, Planning, Executing, Monitoring & Controlling, and Closing) spanning ten “knowledge areas” (Project Integration Management, Project Scope Management, Project Schedule Management, Project Cost Management, Project Quality Management, Project Resource Management, Project Communications Management, Project Risk Management, Project Procurement Management, and Project Stakeholder Management).¹⁰ The full set of processes grouped by process group and knowledge area appears in table 3.1:

Table 3.1. Project management process groups and knowledge areas¹¹

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
Project Integration Management ¹²	4.1 Develop Project Charter	4.2 Develop Project	4.3 Direct and Manage Project Work	4.5 Monitor and Control Project Work	4.7 Close Project or Phase

⁵ Edward Chung, “A Short History of the PMBoK Guide Published by PMI” (June 7, 2017), accessed May 20, 2018, <https://edward-designer.com/web/short-history-pmbok-guide-pmi/>.

⁶ Chung, “Short History.”

⁷ Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBok Guide)*, Sixth Edition (Newtown Square, PA: Project Management Institute, Inc., 2017).

⁸ PMI, *A Guide*, sec. 1.2.4.1–2.

⁹ PMI, *A Guide*, sec. 1.2.4.4. The bulk of the book’s contents detail these processes.

¹⁰ PMI, *A Guide*, sec. 1.2.4.5–6.

¹¹ PMI, *A Guide*, 25.

¹² Numbering of knowledge areas and processes corresponds to chapter and section numbers in the *PMBok Guide*. Numbering begins at 4 because chapters 1–3 are introductory material.

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
		Management Plan	4.4 Manage Project Knowledge	4.6 Perform Integrated Change Control	
Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
Project Schedule Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
Project Quality Management		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
Project Resource Management		9.1 Plan Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Resources 9.4 Develop Team 9.5 Manage Team	9.6 Control Resources	
Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks	11.6 Implement Risk Responses	11.7 Monitor Risks	

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
		11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses			
Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagement	13.4 Monitor Stakeholder Engagement	

The model for project management detailed in the *PMBOK Guide* has been adopted by the American National Standards Institute as ANSI/PMI 99-001-2017, and by the International Standards Organization as ISO 21500:2012.¹³ SIL members Marmor and Bartels, authors of a guide to managing language-development programs, characterize the PMI approach as “arguably the most important project management standard [and] a de facto international standard for project management.”¹⁴

The *PMBOK Guide* recommends tailoring this model to particular contexts, but guidance for how to do that is “outside the scope of this guide.”¹⁵ Certified Project Management Professional Curtis Cook provides such guidance in his book *Just Enough*

¹³ STS Sauter Training & Simulation S.A., *Comparing PMBOK® Guide 4th Edition, PMBOK® Guide 5th Edition and ISO 21500* (Lausanne, Switzerland: STS, 2014), 2 accessed May 20, 2018, http://sts.ch/themes/sts/root/files/7037_EN_Comparing_PMBOK_and_ISO.pdf.

¹⁴ Marmor and Bartels, *Managing Language Programs*, 76.

¹⁵ PMI, *A Guide*, 28.

Project Management, which advocates a common-sense implementation of the model from the *PMBoK Guide*. He quips, “for the majority of us, using formal project management techniques on our average-sized projects is like hiring an accounting firm to balance our checkbooks.”¹⁶ For example, in contrast to the eighteen components of the project plan and 33 additional supporting documents listed in the *PMBoK Guide*, Cook advises: “Depending on the size of the project, the project team may produce a variety of subordinate plans, such as a risk plan, a communications plan, and a scope change control plan. On smaller projects these are simply sections or paragraphs in the overall Project Plan.”¹⁷ We are following the spirit of his guide at CBS as we take what is useful from the *PMBoK Guide* and the standards it represents and apply them in our context. The details of our implementation are given in table 4.1, following discussion of the other works which have influenced our approach.

One difference between the industrial contexts for which the PMI model was developed and the work of Bible translation organizations is that our goals are not driven by a business case and our motivation is not financial gain. Instead, Bible translation projects are birthed out of discussions with stakeholders who hope to see the Bible impact a particular community, and sponsored by organizations and donors who believe in the value of that impact. In this way, Bible translation is similar to development work. The comments by Project Management for Development Organizations (PM4DEV), given in chapter 1, bear repeating: development work (and the same could be said of Bible translation) tends not to involve the use of

the basic tools methods and processes that are commonly used in the project management profession, widely used in the private and government sectors. ...

¹⁶ Curtis R. Cook, *Just Enough Project Management* (New York: McGraw-Hill, 2005), ix.

¹⁷ Cook, *Just Enough Project Management*, 33–34; cf. PMI, *A Guide*, 89.

For most organizations, project management has been reduced to the management of technical activities designed during the project proposal and little effort is done to plan the implementation, monitoring and evaluation of the project.¹⁸

This “causes additional costs, increases risks and reduces the trusts donors and stakeholders have on the organization.”¹⁹ Industry has thought harder about these issues than we have, and has developed tools we could be making more use of.

One way in which development organizations have addressed these shortcomings involves the use of a framework called Results-Based Management (RBM). Marmor and Bartels credit the former Canadian International Development Agency (CIDA) with the development of RBM,²⁰ and note that it is used by many agencies, “especially the agencies within the United Nations Development Group such as UNESCO and UNDP.”²¹

RBM measures success by looking at the changes which take place as a result of project or program activities, rather than simply tracking the completion of those activities. Planning in RBM involves logical relationships leading from activities (which require resources as inputs), through the short-term results of those activities (“outputs”), to outcomes which are the consequences of the outputs, and on to long-term impact which occurs after the end of the program but as a result of the program:

¹⁸ Project Management for Development, *Benefits of a Project Management Methodology* (PM4DEV, 2011), 1, accessed May 20, 2018, <https://www.pm4dev.com/resources/docman/pm4dev-articles/9-benefits-of-a-project-management-methodology/file.html>.

¹⁹ PM4DEV, *Benefits*, 3.

²⁰ The work of CIDA is now carried out by the International Development department of Global Affairs Canada.

²¹ Marmor and Bartels, *Managing Language Programs*, sec. 5.2.3.

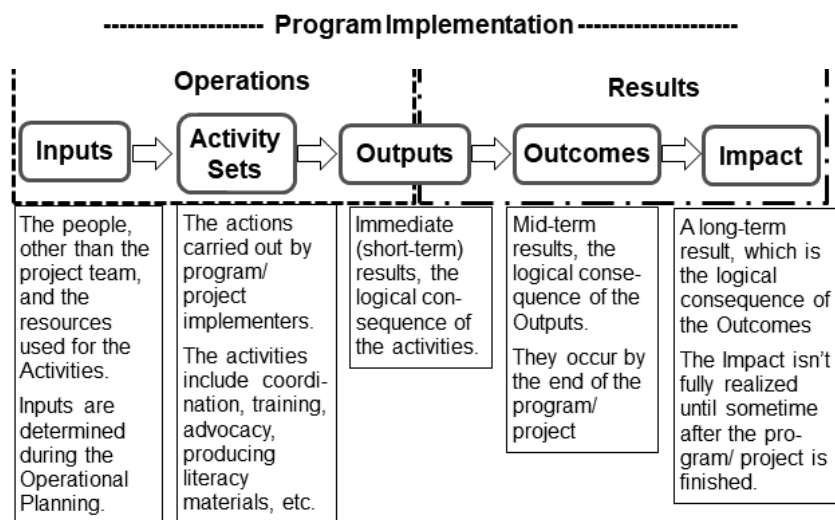


Figure 3.1. A key component of RBM: the results chain. Marmor and Bartels, *Managing Language Programs*, 195.

Marmor and Bartels wrote a textbook which brings together RBM and the PMI model of project management in the context of language development programs.²² They call their approach “Managing for Language Development Results,” or *MfLDR*. “MfLDR seeks to bring a balance between the openness and flexibility necessary for a beneficiary-based, participative results-oriented approach and the contributions from the discipline of project management for planning, organizing, and managing operations.”²³

Note that a project is not the same as a program. In the context of overall language development programs, projects correspond to activity sets leading to outputs. A program would typically consist of a number of projects which together aim to result in the desired outcomes and then impact. In MfLDR, the management of projects involves standard project management tools such as Work Breakdown Structures,²⁴ Gantt charts,²⁵

²² Marmor and Bartels, *Managing Language Programs*.

²³ Marmor and Bartels, *Managing Language Programs*, sec. 5.4.

²⁴ Marmor and Bartels, *Managing Language Programs*, sec. 12.2; cf. PMI, *A Guide*, sec. 5.4 Create WBS.

²⁵ Marmor and Bartels, *Managing Language Programs*, sec. 12.3; cf. PMI, *A Guide*, sec. 6.5 Develop Schedule.

progress monitoring,²⁶ risk management,²⁷ stakeholder engagement,²⁸ a budget and the monitoring and control of costs,²⁹ and a personnel plan.³⁰ Marmor and Bartels' chapter 16 ("Project Manager and Project Management") also draws heavily from the *PMBok Guide*.

Marmor and Bartels contrast "hard" and "soft" programs and projects, that is, those with tangible objectives and those with intangible objectives, respectively.³¹ Much language development work is "soft" because it is "aimed at a change in the attitudes, behaviors, or conditions of a group of people, a community, or society."³² They point out, however, that within a "soft" language development program, some projects may be "hard," i.e., have tangible objectives.³³ That is the case for Bible translation projects: even if the project is part of a larger ("soft") program, such as a language development or Scripture engagement program for a particular community, a Bible translation project is "hard" because it aims at the production of tangible Scripture products.

Because Bible translation projects generally involve significant participation from the community for whom the Bible is being translated, stakeholder engagement in Bible translation resembles stakeholder engagement in community development programs more closely than it resembles stakeholder engagement in industry. A company may be able to

²⁶ Marmor and Bartels, *Managing Language Programs*, ch. 10 and sec. 13.2; cf. PMI, *A Guide*, sec. 4.5 Monitor and Control Project Work and the other processes in the Monitoring and Controlling process group.

²⁷ Marmor and Bartels, *Managing Language Programs*, ch. 9 and sec. 13.3; cf. PMI, *A Guide*, ch. 11 Project Risk Management.

²⁸ Marmor and Bartels, *Managing Language Programs*, ch. 6 and sec. 13.4; cf. PMI, *A Guide*, ch. 13 Project Stakeholder Management.

²⁹ Marmor and Bartels, *Managing Language Programs*, sec. 13.7; cf. PMI, *A Guide*, ch. 7 Project Cost Management.

³⁰ Marmor and Bartels, *Managing Language Programs*, sec. 13.5; cf. PMI, *A Guide*, ch. 9 Project Resource Management.

³¹ Marmor and Bartels, *Managing Language Programs*, sec. 2.5.1 and 15.1.1.

³² Marmor and Bartels, *Managing Language Programs*, sec. 2.5.1.

³³ Marmor and Bartels, *Managing Language Programs*, sec. 2.5.1 and 15.1.1.

hire or train employees to do exactly what needs to be done in the way it was planned; Bible translation projects often involve volunteers or part-time staff who need to learn their roles “on the job” and balance project work with other commitments. A company may initiate a project in response to a contract with or an order from a client, but Bible translation projects are shaped in response to the needs of an entire language group, and the success of a Bible translation project depends on the community’s acceptance of the project’s products. As Marmor and Bartels point out for language development projects, the effectiveness of Bible translation projects depends on “healthy relationships between all of the participating stakeholders, including the local community ... [and] on understanding the potential actions of those who are opposed to such endeavors.”³⁴

CBS’s approach to stakeholder engagement in Bible translation project management will thus draw more heavily from *MfLDR* than from the *PMBoK Guide*.

Bible Translation Project Management

The Bible translation literature tends to focus on exegetical, linguistic, or translation-theoretic issues; very little is written on the topic of project management. The standard digital library of Bible translation resources, *Translator’s Workplace*, includes a topical index to the journals *Notes on Translation* and *The Bible Translator*; this index does not have a project management section. Articles on project planning, such as that by Arensen and Brown,³⁵ only discuss which books to translate and in what order to plan to translate them.

³⁴ Marmor and Bartels, *Managing Language Programs*, sec. 6.4.1.

³⁵ Jonathan E. Arensen and D. Richard Brown, “Objectives and Priorities in Bible Translation,” *Notes on Translation* 113 (June 1986): 1–9, *Translator’s Workplace*.

This is not to say that nothing of relevance has been written. What might be considered the traditional Wycliffe/SIL approach to project management was discussed in the context of SIL linguistic work by Karl Franklin in an article in 1978.³⁶ Franklin contrasts two models of project management, the “ministry model” and the “project model,” and argues that SIL fieldworkers tend to be oriented toward the ministry model,³⁷ which means that:

1. The “work” somehow “belongs” to the individual and is related to his [or her] particular perceived gifts or skills.
2. The progression is “natural,” being based on an open-ended continuum and unstated variables.
3. The matter of accountability is theoretical and without any immediate consequence.³⁸

In particular, the time-orientation of the project model may be lacking. Instead, Franklin describes the worker’s conceptualization of their job as the creation of a particular product (say, a linguistics paper), the completion of which, not necessarily according to a schedule, signifies the end of that task. “The project revolves around countless interruptions (sickness, babies, sudden changes in plans), numerous rationalizations about workshop priorities, culminating with some final celebration when the job is finished.”³⁹ The work gets done because of the high motivation of the workers, that is, their commitment to goals and tasks, if not plans, schedules, or budgets. Franklin discusses the difficulties this creates for an organization attempting to manage its workers and projects and set and achieve strategic priorities. In particular, building an organization’s capacity for future work requires some workers to invest in priorities

³⁶ Karl J. Franklin, “On the Management of SIL Language Programs,” *Notes on Linguistics* 8 (1978): 6–15, LinguaLinks Library.

³⁷ Franklin, “On the Management,” sec. 2.

³⁸ Franklin, “On the Management,” sec. 2.

³⁹ Franklin, “On the Management,” sec. 2.

outside of their own current projects. My experience in SIL suggests that the situation Franklin confronted has not changed very much in 40 years. I hope that the present thesis-project's highlighting of project management will contribute to more effective management in Bible translation organizations in general.

SIL's need for a standard approach to program planning, if not all of project management, led to the teaching of language program planning courses at SIL training schools. SIL members Margaret and David Bendor-Samuel wrote a textbook for these courses, *A Manual for Strategic Planning and Review for Language Programs*.⁴⁰ They introduce a framework called "SPAR" (for "strategic planning and review"),⁴¹ based on the then-current practices of SIL, particularly in Africa, yet intended for wider application.⁴² The SPAR approach involves "thinking about the situation in which we are working, ... reflect[ing] upon those aspects which are most relevant to our work," "think[ing] about our goals," "strategies," "listing activities and layout out plans of action for specific periods of time," and "recording our progress towards these objectives and ... reviewing and reflecting on how things have developed so as to improve our performance."⁴³ The framework consists of a number of tools to assist language teams in their planning and monitoring, namely a national level background questionnaire and assessment, local level background questionnaire and assessment, entity strategy statement, plan for the preparation phase, strategic master plan, and annual review and update.⁴⁴

⁴⁰ Margaret Bendor-Samuel and David Bendor-Samuel, *A Manual for Strategic Planning and Review for Language Programs* (Dallas: SIL, 1987).

⁴¹ Bendor-Samuel and Bendor-Samuel, *A Manual*, 2.

⁴² Bendor-Samuel and Bendor-Samuel, *A Manual*, v.

⁴³ Bendor-Samuel and Bendor-Samuel, *A Manual*, 1.

⁴⁴ Bendor-Samuel and Bendor-Samuel, *A Manual*, 2–5. "Entity" is the term used in SIL for an organizational unit such as an SIL group responsible for work in a particular country.

The focus of SPAR is on activities and schedule, with some attention given to scope, risk management, and stakeholder relations, and nothing said about project cost management, communications management, procurement management, or quality management, or even continued management of stakeholder relations beyond the initial identification of stakeholders. Project cost management appears to be beyond the scope of the SPAR approach, which essentially limits its concerns to planning activities and reviewing progress related to those activities. The lack of communications management in the approach to project management typified by SPAR is lamented by Sherwood Lingenfelter in an article which appeared not long before the SPAR manual was published.⁴⁵ Procurement management is not addressed presumably because procurement issues are not particularly complicated in Bible translation projects. Quality management is also not addressed presumably because standards for translation procedures and a standard system of translation consultant checking have long been in place in Bible translation agencies.⁴⁶

The SPAR approach begins with investigating the context of the language program at both the national level and the local level. It divides a language program into two phases, a preparation phase during which the project team learns what they need to

⁴⁵ Sherwood Lingenfelter, "Organizing a Translation Program: The Case of the Yamba in Northwest Cameroon," *Notes on Translation* 114 (August 1986): sec. Program and Procedural Modifications, para. 1–5. Translator's Workplace.

⁴⁶ See for example Forum of Bible Agencies International, "Statement on Qualifications for Translation Consultants" (FOBAI, 2006), accessed May 20, 2018, http://www.forum-intl.org/_literature_111503/FOBAI_Translation_Consultant's_Qualifications and Forum of Bible Agencies International, "Basic Principles and Procedures for Bible Translation" (FOBAI, 2017), accessed May 20, 2018, http://www.forum-intl.org/_literature_111504/FOBAI_Translation_Basic_Principles_and_Procedures_2017.

learn and builds relationships (i.e., begins stakeholder management).⁴⁷ In some situations, “the team will need an extended period in the group, building relationships and understanding the situation, before even tentative goals and strategies can be made.”⁴⁸ This investigation leads to summary statements about the program’s context; this corresponds to the PMBoK processes which involve identifying stakeholders and identifying (and perhaps analyzing) risks.

Out of this analysis comes the setting of goals and strategies;⁴⁹ this corresponds to developing the project charter and many of the activities in the planning process group in the PMBoK approach. One key difference with the PMBoK approach relates to personnel: the PMBoK approach assumes that personnel with the appropriate skills for the project can generally either be hired, found within the organization, or trained, whereas SPAR, recognizing that some project locations (e.g., villages in the developing world) may simply lack such personnel, recommends designing strategies around the people available.⁵⁰

The program plan in the SPAR approach includes “a long-range overview of the total project as we expect it to develop,” “a mid-range plan ... cover[ing] typically a three or four year span,” and “a short-range plan ... a detailed list of activities for the immediate future ... for [not] more than a year ahead at most.”⁵¹ Recognizing that much work in the developing world is subject to unpredictable change, the long-range plan is

⁴⁷ In the case of expatriate missionaries living in the language community, the learning particularly includes language and culture learning and learning about the local situation. Bendor-Samuel and Bendor-Samuel, *A Manual*, 49.

⁴⁸ Bendor-Samuel and Bendor-Samuel, *A Manual*, 119.

⁴⁹ Bendor-Samuel and Bendor-Samuel, *A Manual*, 130–150.

⁵⁰ PMI, *A Guide*, sec. 9.3; Bendor-Samuel and Bendor-Samuel, *A Manual*, 136.

⁵¹ Bendor-Samuel and Bendor-Samuel, *A Manual*, 4.

not detailed,⁵² but does resemble a Gantt chart in that it sequences activities over time.⁵³ It does not address dependencies except intuitively, and it does not address who will do what. The more detailed short-range plans require the project team to “draw up lists of the actual activities which will be needed and lay these out in some kind of time frame”⁵⁴ and are “presented as a chart plus an accompanying list of activities or just as a list of activities.”⁵⁵ The authors allow but do not require the short-range plans to include assignment of tasks to personnel.⁵⁶ These parts of the SPAR framework correspond to the PMBoK task list (i.e., WBS) and schedule, though they are much less detailed. As far as I can tell, the lack of detail can be explained either because language program teams have been trained enough to handle the details intuitively, or because their organizations provide help with the details, e.g., in the form of “well-developed technical handbooks or memos that outline sequences of activities which are recommended to or required of language teams as they get into their work.”⁵⁷

SPAR includes annual review of the project plan and progress, and a final evaluation at the close of the project,⁵⁸ as opposed to the “continuous monitoring” assumed by the PMBoK approach.⁵⁹ I think it is safe to assume that, in the kind of language program envisioned by SPAR, the project team will be monitoring progress continuously, but might not be required to report or reflect on that progress regularly or frequently. In my experience in the Bible translation world, the pressure for regular and

⁵² Bendor-Samuel and Bendor-Samuel, *A Manual*, 150–151.

⁵³ See the sample on Bendor-Samuel and Bendor-Samuel, *A Manual*, 186–187.

⁵⁴ Bendor-Samuel and Bendor-Samuel, *A Manual*, 122.

⁵⁵ Bendor-Samuel and Bendor-Samuel, *A Manual*, 153.

⁵⁶ Bendor-Samuel and Bendor-Samuel, *A Manual*, 153.

⁵⁷ Bendor-Samuel and Bendor-Samuel, *A Manual*, 130.

⁵⁸ Bendor-Samuel and Bendor-Samuel, *A Manual*, 161.

⁵⁹ PMI, *A Guide*, 107.

frequent (e.g., quarterly) reporting comes from project funders, and not from any acknowledgement on the part of Bible translation organizations or project managers that such reporting is part of effective project management and good stewardship of resources. The present thesis-project attempts to address a small part of this broader problem.

During the 1980s, SIL in Africa also published some guidance on project management as part of their series of *Africa Area Translation Aids*. Aid 1, “Before Beginning Translation,” encourages spending “extensive time” on stakeholder relations to help achieve buy-in to the translation project from the local community.⁶⁰ As discussed above regarding *MfLDR*, this is entirely appropriate and agrees with our experience and approach at the Canadian Bible Society. Aid 2, “On Planning and Organising a Bible Translation Project,” elaborates on the responsibilities of these stakeholders in terms of forming a translation committee, serving as reviewers, and encouraging the use of the new translation.⁶¹ Aid 2 also lists items to include in the project budget,⁶² some very general comments about timing,⁶³ but not scheduling, and a task list for translation, from initial study through printing, without discussing other tasks which are part of a Bible translation project.⁶⁴ Aid 6, “On Planning Goals for a Translation Project,” elaborates on scheduling by recommending three components of a project plan: a list of overall goals, a list of goals to accomplish in the next 3–5 years and a schedule which indicates which

⁶⁰ SIL Africa Area Translation Department, *Africa Area Translation Aids (AFATA)* (Dallas, SIL International: 1989), Translator’s Workplace, Aid 1, sec. 2.

⁶¹ SIL Africa Area Translation Department, *Africa Area Translation Aids*, Aid 2. N.b. Aid 2 is reproduced as Katharine Barnwell, *Bible Translation: An Introductory Course for Mother-Tongue Translators*, 3rd edition (Dallas: SIL International, 1986), part 2.

⁶² SIL Africa Area Translation Department, *Africa Area Translation Aids*, Aid 2, part 2, sec. 1.

⁶³ SIL Africa Area Translation Department, *Africa Area Translation Aids*, Aid 2, part 2, sec. 4.

⁶⁴ SIL Africa Area Translation Department, *Africa Area Translation Aids*, Aid 2, appendix.

year to work on them in, and a month-by-month list of activities for the next twelve months. A week-by-week schedule for the next year is not produced, but each week's schedule may be produced at the start of that week, and each day's schedule may be produced at the start of that day.⁶⁵ This work also envisions some progress monitoring: an unspecified "monthly report."⁶⁶ Finally, aid 6 includes some helpful perspective on the human side of these projects:

It is important to have goals, but it is also important to be sensitive to the people and situations around us and to be available to help and communicate with others. We need to seek a right balance. ... We have to learn to keep in balance the need to plan wisely, and also the need to be sensitive to God's purpose for each moment, to the human needs around us and our responsibilities to others, and for God's working in our own lives. Try to find a right balance in your life and work! Some of us are "work oriented", and our particular temptation may be to give our work priority, while being insensitive to the people and needs around us. Others of us are "people oriented"; we give time to the people around us, but sometimes lack discipline in planning how to use our time.⁶⁷

These works from the SIL context are helpful in considering how to approach stakeholder engagement in Bible translation projects, and those parts of the task list which are narrowly focused on translating portions of Scripture. Beyond that, they represent the status quo, a lack of attention to the standard tools and methods of project management, which the renewed focus on project management in the Scripture Translations department of the Canadian Bible Society attempts to address, of which focus the present thesis-project is a part.

Outside the SIL context, Eugene Nida argued in the early 1980s that translation principles and procedures should be decided ahead of time, rather than developed ad

⁶⁵ SIL Africa Area Translation Department, *Africa Area Translation Aids*, Aid 6, part 2.

⁶⁶ SIL Africa Area Translation Department, *Africa Area Translation Aids*, Aid 6, part 2.

⁶⁷ SIL Africa Area Translation Department, *Africa Area Translation Aids*, Aid 6, part 2.

hoc.⁶⁸ Documentation of those decisions is now included, at least in United Bible Societies projects, in a document called the Translation Brief.⁶⁹ In terms of the PMBoK model, this information falls under Project Scope Management, in particular the processes leading up to defining the project scope.

Project Management Software and its Evaluation

In her introductory textbook on project management, Kathy Schwalbe describes the project management software landscape this way:

The project management and software development communities have definitely responded to the need to provide more software to assist in managing projects. There are hundreds of tools available, ranging from free online or smart phone apps to enterprise tools costing thousands of dollars to implement and high monthly fees per user. Deciding which project management software to use has become a project in itself.⁷⁰

The *PMBoK Guide* indicates that a project management information system should provide “scheduling software tools, work authorization systems, configuration management systems, information collection and distribution systems, as well as interfaces to other online automated systems such as corporate knowledge base repositories.”⁷¹ Regarding smaller projects, Cook recommends sticking with the office software already in use in the organization, because, for example, “most people don’t

⁶⁸ Eugene A. Nida, “Establishing Translation Principles and Procedures,” *The Bible Translator* Vol. 33, No. 2 (April 1982): 208–213, Translator’s Workplace.

⁶⁹ See, e.g., “Translation Procedure Guidelines for Projects with UBS Involvement” (unpublished manuscript, last modified March 17, 2018), Microsoft Word file, para. 3.

⁷⁰ Kathy Schwalbe, *An Introduction to Project Management*, fifth edition (Minneapolis, MN: Schwalbe Publishing, 2015), ch. 1, sec. Project Management Software, para. 1. See also A. S. Bani Ali, F. T. Anbari, and W. H. Money, “Impact of Organizational and Project Factors on Acceptance and Usage of Project Management Software and Perceived Project Success,” *Project Management Journal* 39(2) (2008), sec. Literature Review, subsec. Project Management Software, para. 3, accessed May 20, 2018, doi: <http://dx.doi.org/10.1002/pmj.20041>, <https://www.pmi.org/learning/library/project-management-software-perceived-project-5581>.

⁷¹ PMI, *A Guide*, 95.

have scheduling software, and many of those who do have it don't know how to use it effectively.”⁷² Schwalbe also mentions this kind of solution: “Many project teams still use spreadsheets or other familiar software to help manage projects.”⁷³ She continues, “however, if you can master a good project management software tool, it can really help in managing projects.”⁷⁴ The present thesis-project will consider Cook's recommendation and Schwalbe's advice. That is, among the list of software for evaluation, the combination of Microsoft Office, ParaText,⁷⁵ and the United Bible Societies's *Translation Management System* (“TMS”),⁷⁶ already in use at CBS, will be considered alongside specialized project management programs. Communication with Seed Company Field Coordinators has familiarized me with other tools in use to some extent in Bible translation organizations, namely the Seed Company's *Planning and Progress* (“P&P”) spreadsheet,⁷⁷ and SmartSheet,⁷⁸ both of which will be included on my list of software tools to evaluate.

There are countless reviews of project management software online.⁷⁹ One overview of the market lists Microsoft Project as the top project management

⁷² Cook, *Just Enough*, 43.

⁷³ Schwalbe, *An Introduction*, appendix A, sec. Introduction, para. 1.

⁷⁴ Schwalbe, *An Introduction*, appendix A, sec. Introduction, para. 1.

⁷⁵ “Paratext 8,” accessed May 20, 2018, <https://pt8.paratext.org/>. The project management features of ParaText 8 are described in detail in Doug Higby and Jeff Shrum, “Paratext 8: Project Management Where You Need It Most,” paper presented at Bible Translation 2017, Dallas, Texas, USA, October 13–17, 2017.

⁷⁶ “Translation Publishing and Management System,” accessed May 20, 2018, <https://tms.biblesocieties.org/>.

⁷⁷ Various Seed Company Field Coordinators, personal communication.

⁷⁸ “Smartsheet: Work Different,” accessed May 20, 2018, <https://www.smartsheet.com/>.

⁷⁹ A Google search for “project management software review” returned 3.2 million results.

application.⁸⁰ Schwalbe includes an appendix detailing how to use Microsoft Project.⁸¹ Therefore, Microsoft Project will also be considered among the software solutions evaluated.

Many current reviews of project management software may be found online. I will take *PC Magazine*'s current review as representative,⁸² and also evaluate its current top-ranked program, Zoho Projects,⁸³ taking it as representing the vast array of other project management software tools available.⁸⁴

Concerning the evaluation of project management software, PMI supplies a tool for evaluating project portfolio management software.⁸⁵ A project portfolio is the entire set of projects managed by an organization. The tool includes sections which are specific to project portfolio management, and other sections which are specific to project management. The tool consists of 481 attributes of the software system to evaluate. The evaluator gives a score of 1–5 for the importance of each attribute, and can specify criteria to use to decide how to score the software for each attribute. It provides columns to evaluate five software tools, also on a 1–5 scale, and calculates a weighted score by multiplying the score by the importance for each program, for each attribute. It also

⁸⁰ Marija Stevkovska, "Top 10 Project Portfolio Management Software Vendors and Market Forecast 2016–2021," *Apps Run the World* (December 1, 2017), accessed May 20, 2018, <https://www.appsruntheworld.com/top-10-project-portfolio-management-software-vendors-and-market-forecast/>, para. 2. See also Bani Ali et al., "Impact of Organizational," sec. Results, subsec. Descriptive Statistics, para. 3.

⁸¹ Schwalbe, *An Introduction*, appendix A.

⁸² Jill Duffy, "The Best Project Management Software of 2018," *PC Magazine* (May 8, 2018), accessed May 20, 2018, <https://www.pcmag.com/article2/0,2817,2380448,00.asp>.

⁸³ "Online Project Management Software - Zoho Projects," accessed May 20, 2018, <https://www.zoho.com/projects/>.

⁸⁴ 135 project management software packages are listed at *Wikipedia*, s.v. "Comparison of project management software," accessed June 14, 2018, https://en.wikipedia.org/wiki/Comparison_of_project_management_software.

⁸⁵ ProjectsAtWork.com, *Project Portfolio Management Software Evaluation Tool*, version 2.0 (ProjectsAtWork, 2015), accessed June 14, 2018, <https://www.projectmanagement.com/deliverables/231382/PPM-Software-Evaluation-Tool>.

provides totals per program per category and an overall total score for each program.

Figure 3.2 displays an excerpt from this software evaluation tool:

Dimension	Importance (1-5)	Criteria	Evaluation					Analysis				
			Tool #1	Tool #2	Tool #3	Tool #4	Tool #5	Tool #1	Tool #2	Tool #3	Tool #4	Tool #5
1 Functions	0	< Maximum Score	0	0	0	0	0	0	0	0	0	0
1.1 Opportunity Identification/Demand Management	0	< Maximum Score	0	0	0	0	0	0	0	0	0	0
1.1.1 Identification	0	< Maximum Score	0	0	0	0	0	0	0	0	0	0
1.1.1.1 Assign opportunities into customizable categories								0	0	0	0	0
1.1.1.2 Opportunities able to be assigned to multiple categories								0	0	0	0	0
1.1.1.3 Capture of opportunities through a standard form								0	0	0	0	0
1.1.1.4 Configuration and customization of required input fields								0	0	0	0	0
1.1.1.5 Configuration and customization of different input fields based upon opportunity category								0	0	0	0	0
1.1.1.6 Capturing and submission of opportunities externally to the system (email, web site, etc.)								0	0	0	0	0
1.1.1.7 Automatic confirmation emails sent to contributors of opportunities acknowledging receipt of opp								0	0	0	0	0
1.1.2 Identify follow-up information requirements	0	< Maximum Score	0	0	0	0	0	0	0	0	0	0
1.1.2.1 Automatic identification of who is submitting an opportunity or request								0	0	0	0	0
1.1.2.2 Assignment of a unique identifier to each opportunity								0	0	0	0	0
1.1.2.3 Track the number and type of opportunities for each person								0	0	0	0	0
1.1.2.4 Full audit trail of opportunity history maintained								0	0	0	0	0
1.1.2.5 Multiple decision points can be configured and managed								0	0	0	0	0
1.1.2.6 Configurable automatic notification of new opportunities to managers and administrators								0	0	0	0	0
1.1.2.7 Generate notifications as opportunities change status or move through workflow activities								0	0	0	0	0
1.1.3 Evaluation	0	< Maximum Score	0	0	0	0	0	0	0	0	0	0
1.1.3.1 Perform keyword searches across all opportunities								0	0	0	0	0
1.1.3.2 Assign opportunities into customizable status flags								0	0	0	0	0
1.1.3.3 Option to trigger workflow by changing opportunity status								0	0	0	0	0
1.1.3.4 Capture notes and free form text regarding evaluation of the opportunity								0	0	0	0	0

Figure 3.2. Excerpt from ProjectsAtWork.com, *Project Portfolio Management Software Evaluation Tool*

This software evaluation tool formed the basis for the tool I developed for use in this thesis-project. That tool is presented in chapter 4.

In her textbook mentioned above, Schwalbe discusses the “distinct and important features” of project management software: in addition to “other advanced project management features,” project management software can be used to create work breakdown structures, Gantt charts, and network diagrams, to integrate scope, time, and cost data, and to prepare a plan and track progress.⁸⁶ She also lists criteria for evaluating project management software: how well it facilitates collaboration; how well it manages resources including personnel; how well it facilitates typical project management tasks such as budgeting and monitoring project progress; ease of use; and the availability of help or support.⁸⁷ These insights helped shape chapter 4’s analysis of features required or desired in Bible translation project management software.

⁸⁶ Schwalbe, *An Introduction*, appendix A, sec. Basic Features of Project Management Software, para. 3.

⁸⁷ Schwalbe, *An Introduction*, appendix A, sec. Project Management Software Reviews, para. 3.

Bani Ali et al. list six categories of tasks which project management software should help with: “scheduling, cost management, risk management, resource management, communications management, and process management.”⁸⁸ Two other criteria they list are the quality of graphical reports produced by the software and the software’s overall ease of use.⁸⁹ They found that the quality of the reports generated by the software was the factor which most significantly affected the acceptance and usage of the software package.⁹⁰ As with Schwalbe’s insights, discussed above, Bani Ali et al.’s conclusions influenced the identification of features chosen in chapter 4 to look for in software for Bible translation project management.

⁸⁸ Bani Ali et al., “Impact of organizational,” sec. Theoretical Framework and Hypothesis, subsec. Operationalization of Research Constructs, para. 3.

⁸⁹ Bani Ali et al., “Impact of organizational,” sec. Theoretical Framework and Hypothesis, subsec. Operationalization of Research Constructs, para. 4–6.

⁹⁰ Bani Ali et al., “Impact of organizational,” sec. Discussion, Limitations, and Directions for Future Research, para. 2.

CHAPTER FOUR

PROJECT DESIGN

The present thesis-project is evaluative research to assess the contributions which various software packages can make to the management of Bible translation projects. This chapter presents the model for Bible translation project management proposed for use at the Canadian Bible Society, a discussion of the processes in that model which either require or can be facilitated by the use of software, the tool which was developed and used to evaluate software programs, and an introduction to the programs chosen for evaluation. The results of the evaluation follow in chapter 5.

Bible Translation Project Management Model

I propose to model Bible translation project management as the list of processes given in table 4.1, below. The processes should be understood as relating to each other as the processes in the model from the *PMBok Guide* do, where the outputs of one or more processes are used as inputs for others.¹ For a list of the processes from the *PMBok Guide*, see table 3.1. The list in table 4.1 was developed based on table 3.1, modified based on the Canadian Bible Society's experience with Bible translation projects and on the results of the literature review in chapter 3. For example, following Cook's advice, the list was simplified.² Likewise, Marmor and Bartels's discussion of stakeholder engagement influenced the highlighting of stakeholder participation in a number of the processes.³ Although some details reflect the Canadian Bible Society's practices and

¹ Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBok Guide)*, Sixth Edition (Newtown Square, PA: Project Management Institute, Inc., 2017).

² Curtis R. Cook, *Just Enough Project Management* (New York: McGraw-Hill, 2005).

³ Thomas Marmor and Eric Bartels, *Managing Language Programs: Perspectives, Processes, and Practices*, Pike Center for Integrative Scholarship (Dallas: SIL International, 2017).

approaches used in particular in the United Bible Societies, other Bible translation organizations should be able to implement modifications of these processes as appropriate.

Table 4.1. Bible translation project management processes

Phase	Process	Description	Key outputs
Initiating	Develop project charter	Conversations with key stakeholders (representatives of the target community, those working to reach or impact them) to determine translation needs and explore possible project structures.	Translation Needs Assessment ⁴ Project charter ⁵
	Identify stakeholders	Conversations with those who requested the project will lead to including more stakeholders in the project charter and planning conversations.	Stakeholder register
Planning	Develop project plan	Pull together outputs from the processes below.	Project plan. Includes Translation Brief, ⁶ task list, budget, schedule, communications plan, risk management plan, stakeholder engagement plan.
	Clarify scope	Conversations with stakeholders. Can include experimentation, even as far as producing a trial version of some Scripture portions, because it can be helpful to have something concrete to discuss.	Sections of the Translation Needs Assessment, Translation Brief, and project plan dealing with scope.
	Create Translation Brief	Fill out the Translation Brief form for with stakeholder input and approval.	Translation Brief
	Create initial task list	Model the project tasks at a high level.	Task list
	Refine task list ⁷	Model the project tasks in enough detail for schedule and budget.	Task list; Translation Brief includes a section on project procedures
	Create schedule	Milestones for various books are scheduled based on estimated work pace and task sequence. A greater level of detail can be worked out for a	Schedule, possibly including a Gantt chart

⁴ Translation Needs Assessment (TNA) is a particular approach to evaluating project feasibility and prioritization within the United Bible Societies. Other Bible translation organizations will have corresponding approaches.

⁵ A project charter is an initial project proposal which documents community interest and outlines broad project goals.

⁶ A Translation Brief documents high-level decisions about the project scope and structure, including initial guidance on certain translation and language issues. The UBS Translation Brief template is given in appendix 1.

⁷ In our experience at the Canadian Bible Society, the task list goes through multiple rounds of refinement in the initial stages of a project.

Phase	Process	Description	Key outputs
		short-term schedule (3 months, 6 months, 1 year). Stakeholders are included in schedule creation discussions.	
	Prepare budget	For the current project phase, ⁸ work out a detailed budget. Include stakeholders in budget preparation.	Budget
	Estimate personnel needs	Estimate who will be needed to work on the project, and when (e.g., consultants, community reviewers), including associated costs. This may involve identifying particular individuals from the community and beginning to treat them as project stakeholders.	Updates to stakeholder register
	Estimate equipment and service needs	Estimate needs for equipment and for consultants or specialists from other organizations if the required expertise is not available within the managing partnership.	Updates to budget, schedule, communication section of plan.
	Plan communications	Document plans to communicate with stakeholders; establish expectation of regular communication between Translation Officer and translation team; ⁹ plan communication with outside consultants if necessary.	Translation Brief includes a section on communications.
	Plan risk management	In discussion with stakeholders, identify and analyze risks and plan risk responses. Document as part of project plan.	Project plan includes a risk analysis and responses section
	Plan Scripture engagement	If the translation project is part of a wider Scripture Engagement program, this is covered at the program level not the translation project level. Otherwise, plan marketing & community engagement activities.	Project plan may include a Scripture Engagement section
	Plan stakeholder engagement	Plan regular meetings with stakeholders to discuss project progress and maintain community buy-in and ownership.	Project plan includes a stakeholder engagement section
Executing	Recruit team	Work with local partner to hire paid staff and get written expressions of commitment from volunteers.	Committed team of translators
	Train team	Run training events according to the plan and as needs arise.	Trained translation team
	Manage team	Work with local partner (as appropriate) to manage team personnel.	Well-managed translation team
	Manage project work	Communicate plans, goals, schedules to project staff. Approve spending and	Well-managed translation project

⁸ It is becoming normal to plan Bible translation projects in phases of 1–3 years.

⁹ A Translation Officer in the United Bible Societies functions both as the manager of a Bible translation project and as a Bible translation consultant, training translators and checking their work.

Phase	Process	Description	Key outputs
		procure equipment and services as needed. Communicate following the plan.	
	Manage project knowledge	Keep files organized and stored responsibly.	Project documentation, including a register of “lessons learned”
Monitoring and Controlling	Monitor and control project work	Monitor input from community reviews to ensure the project is producing materials acceptable to the community. Monitor work progress and spending and make minor adjustments to scope, schedule, and budget as appropriate. Read consultant reports and inspect publications to monitor quality. Periodically check to ensure communications, risk management, and stakeholder engagement parts of the plan are being followed.	Project reports
	Change plans	Major deviations from scope, schedule, or budget are reviewed by key stakeholders. The plan is changed as necessary.	Updates to project plan
Closing	Close project or phase	Pass publications on to distribution channels. Archive project documentation and work files (Paratext, audio, publications). Restrict Paratext project permissions. Record project completion on TMS. Pass on "lessons learned" within department or organization. Celebrate completion. ¹⁰ Release resources.	Publication availability Project archive Lessons learned

Software Features for Bible Translation Project Management

Many of the processes in table 4.1’s model require or can be facilitated by the use of software. Table 4.2, below, discusses aspects of each process which require software beyond what is commonly in use in office environments. In addition to the requirements discussed, some organizations may have custom databases or other systems for managing project documentation. For example, the United Bible Societies’s Translation Management System (TMS) stores the Translation Needs Assessment, Translation Brief,

¹⁰ The celebration of completion often involves a Scripture dedication ceremony in the community.

and certain other project documents. TMS is accessed through a web browser. For processes which do not require software other than a web browser or a word processor, table 4.2 will indicate that specialized software requirements are not applicable (“n/a”).

Table 4 2. Specialized software requirements for Bible translation project processes

Process	Software requirements
Develop project charter	n/a
Identify stakeholders	Contact management
Develop project plan	Task list Spreadsheet for budget Schedule (Gantt chart if desired)
Clarify scope	n/a
Create Translation Brief	n/a
Create initial task list	Task list
Refine task list	Task list
Create schedule	Schedule
Prepare budget	Spreadsheet
Estimate personnel needs	Task list, schedule
Estimate equipment and service needs	Task list, schedule
Plan communications	Contact management
Plan risk management	n/a
Plan Scripture engagement	n/a
Plan stakeholder engagement	Contact management
Recruit team	Contact management
Train team	n/a
Manage team	n/a
Manage project work	Progress tracking related to task list and schedule System to manage project reports
Manage project knowledge	Knowledge management
Monitor and control project work	Progress tracking related to task list and schedule System to manage project reports
Change plans	n/a
Close project or phase	n/a

Table 4.2 identifies six components of Bible translation project management which require or can be facilitated by software other than a web browser or word processor:

1. Contact management
2. Spreadsheet
3. Task list
4. Schedule
5. Progress tracking
6. Reporting and report management

Contact management software would primarily facilitate stakeholder engagement by helping project managers record pertinent information about the people involved in the project. This information would include basics like name and contact methods (phone numbers, e-mail addresses). The ability to keep records of interactions with the contacts would also be useful.

Spreadsheet functionality is found in common office software suites and is indispensable for project budgeting. Desirable features of project management software would be the inclusion of spreadsheets in the project document storage system and the integration of spreadsheets with progress tracking and reporting.

A task list in project management, also known as a work breakdown structure (WBS), is “a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables.”¹¹ It is more than just a list of the things to be done during the execution of the project. The task list ideally contains information about the duration of each task, the resources (personnel, equipment, and finances) required to perform each task, and the relationships of one task to another. For example, a translation team’s internal review of a draft chapter cannot begin until the chapter has been drafted. A task list with these features facilitates the creation of the project schedule and the project budget. Another

¹¹ Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK Guide)*, Sixth Edition (Newtown Square, PA: Project Management Institute, Inc., 2017), 157.

desirable feature of a task list is its usability by the translation team to know what to work on at any given point in time.

The project schedule should indicate who is going to work on what, when, and for how long. Bible translation projects do not tend to schedule every hour of every translator's work day, so the ability to allocate days or weeks to each task is desirable.

Software can facilitate tracking the team's progress against the planned budget and schedule. Important features in cost control include the ability to input costs as they are incurred, and in multiple currencies and with exchange rates that change throughout the life of the project, storage for electronic images of receipts, and the production of financial reports which summarize the expenses in a given period of time and compare those costs with the budget. Important features in schedule management include the ability to track which tasks are complete or are partly complete (e.g., number of verses or chapters for which a task has been completed), and the production of reports which compare actual progress against the project schedule.

Finally, different project reports need to be produced throughout the life of a project, for different constituencies, and these reports need to be kept organized. For example, translation teams need to know how much money they can spend on what, and which tasks they are expected to complete by certain deadlines; project funders and other stakeholders require regular reports on project progress and health, but different stakeholders might have different reporting requirements or expectations; and the project manager needs much more detailed information about the project status at any given point in time. In addition, many Bible translation projects interface with accounting systems outside the project level, such that the project manager submits expense reports

to the system and receives regular reports comparing actual spending to the project budget. The formats of these reports are normally not under the control of the project manager, but is set by the relevant accounting department. Therefore, project management software needs at least to be able to store these reports, and it would be best if the software could produce the reports that the project manager is required to submit.

Assessment Tool Design

Design of the assessment tool detailed below began with pilot testing of the project management software evaluation tool promoted by PMI,¹² described in chapter 3. Importance values between zero¹³ and five were assigned to each attribute, although in some cases entire sections of attributes were judged to be redundant or irrelevant to the work of CBS's small translation department, so those sections were hidden from view in the spreadsheet. This had the equivalent effect of setting the importance of each of those attributes to zero. From the tool's list of 481 attributes, 107 remained which seemed to be of greater or lesser importance in managing our projects.

From the list of candidate software packages, Zoho Projects¹⁴ was chosen for pilot testing. Zoho Projects was chosen because it purports to be a user-friendly, general-purpose project management software package, and its enterprise edition was available for a free trial. Six months of tasks for one of CBS's Bible translation projects were modeled in Zoho Projects for the purposes of gaining familiarity with the program. After

¹² ProjectsAtWork.com, *Project Portfolio Management Software Evaluation Tool*, version 2.0 (ProjectsAtWork, 2015), accessed June 14, 2018, <https://www.projectmanagement.com/deliverables/231382/PPM-Software-Evaluation-Tool>.

¹³ The tool is designed to use a scale from 1–5. An importance of one and a score of one (“criteria not met”) would have resulted in a value of one being added to the program’s total score. An importance of zero allowed me to omit criteria from evaluation.

¹⁴ “Online Project Management Software - Zoho Projects,” accessed May 20, 2018, <https://www.zoho.com/projects/>.

this modelling, Zoho Projects was assessed for each of the remaining 107 attributes using the evaluation tool.

The result of this pilot test was the conclusion that this evaluation tool is too complex, too generic, and too heavily influenced by the concerns of particular industries for the task at hand.

A new evaluation tool was designed based on the PMI tool, but with attributes determined by the above analysis of Bible translation project management software requirements. The resulting attribute list, consisting of 41 attributes, is as follows:

1. Contact management
 - 1.1. Record name, contact info, notes about contacts
 - 1.2. Associate multiple notes with each contact
 - 1.3. Group contacts
 - 1.4. Assign project roles to contacts
 - 1.5. Record interactions with contacts
2. Spreadsheet
 - 2.1. Link to external spreadsheets
 - 2.2. Import spreadsheet
 - 2.3. Spreadsheet functionality built-in
 - 2.4. Produce reports in spreadsheet format¹⁵
3. Task list
 - 3.1. Create task list
 - 3.2. Assign personnel to tasks
 - 3.3. Assign non-personnel resources to tasks
 - 3.4. Task durations
 - 3.5. Task dependencies
 - 3.6. Team members can view their own tasks
4. Schedule
 - 4.1. Calculate critical path
 - 4.2. Produce schedule from task durations and dependencies
 - 4.3. Schedule tasks by day, week
 - 4.4. Schedule time off, weekends, holidays
5. Progress tracking
 - 5.1. Track expenses
 - 5.2. Support multiple currencies, exchange rates
 - 5.3. Store receipt images
 - 5.4. Track task completion

¹⁵ This attribute specifically concerns the software's ability to produce financial reports in custom spreadsheet formats for interface with different organizational accounting systems.

- 5.5. Track partial task completion (e.g., % complete)
6. Reporting and report management
 - 6.1. Report on actual expenses vs. budget
 - 6.2. Report on actual progress vs. schedule
 - 6.3. Produce or store custom reports
 - 6.4. Customizable project dashboard
7. Other
 - 7.1. Cost
 - 7.2. Ease of use
 - 7.3. Quality of documentation

The PMI evaluation tool includes a value for the “importance” of each attribute.

Because these attributes were all identified based on the above analysis of ways in which software can facilitate Bible translation project management, they can all be considered as approximately equal in importance. Therefore, in the spirit of Cook’s *Just Enough Project Management*, the “importance” columns of the evaluation tool, and their effect on the overall evaluation (calculated in columns labelled Analysis), were left out of the evaluation tool developed for the purposes of the present thesis-project. An excerpt from the resulting tool is given in figure 4.1, below, and the entire tool appears with the data from this evaluation in appendix 2.

Bible translation project management software evaluation tool									
		Evaluation							
		ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Attribute	Criteria								
1. Contact management									
1.1. Record name, contact info, notes about contacts									
1.2. Associate multiple notes with each contact									
1.3. Group contacts									
1.4. Assign project roles to contacts									
1.5. Record interactions with contacts									
2. Spreadsheet									
2.1. Link to external spreadsheets									
2.2. Import spreadsheet									
2.3. Spreadsheet functionality built-in									

Figure 4.1. Excerpt from the Bible translation project management software evaluation tool

The evaluation followed the same steps as the pilot test described above: each software application was used to model the next few months of a particular current translation project, and this modelling provided sufficient familiarity with the program to carry out the evaluation using the evaluation tool. For each attribute in the first six categories, each program was scored on each attribute using the 1–5 scale from the PMI tool:

- Criteria are completely met (5 points)
- Criteria are mostly met; requirement can be delivered by the solution in its current form (4 points)
- Criteria partially met; requirement can be met with some changes to business processes (3 points)
- Criteria not met; requirement can be met with software customization (2 points)
- Criteria not met (1 point)¹⁶

For attributes in the “other” category, the following specific criteria were established and recorded in the Criteria column.

Table 4.3. Criteria for the evaluation of certain attributes

Attribute	Criteria
7.1. Cost	5: free or assumed already to be in use in the organization or project 4: one-time or yearly cost not more than \$120 ¹⁷ 3: one-time or yearly cost greater than \$120, up to \$240 2: one-time or yearly cost greater than \$240, up to \$360 1: one-time or yearly cost greater than \$360
7.2. Ease of use	5: Highly intuitive 4: Most functions intuitive; others easy to learn to use 3: Some functions intuitive; some not easy to learn to use 2: Many functions not intuitive 1: The use of even basic functions is unclear

¹⁶ ProjectsAtWork.com, *Evaluation Tool*, sheet Using This Tool.

¹⁷ All prices herein are given in US dollars because US dollars function as a de facto international or standard currency in much of the Bible translation world.

Attribute	Criteria
7.3. Quality of documentation	5: Documentation is thorough, clear, and accessible 4: Documentation generally has two of these three qualities: thorough, clear, accessible 3: Documentation generally has only one of these three qualities: thorough, clear, accessible 2: Documentation limited to basic instructions and/or examples 1: Program contains little to no documentation

Software Candidates for Evaluation

Following Cook's and Schwalbe's advice,¹⁸ software already in use in Bible translation organizations was chosen for evaluation. This includes ParaText,¹⁹ UBS's Translation Management System ("TMS"),²⁰ the Seed Company's Planning & Progress tool ("P&P"), and Microsoft Office.²¹

ParaText is "the world's leading software application for the development and checking of new Bible translation texts, or revisions to existing texts."²² It is produced jointly by the United Bible Societies and SIL. Its current version, version 8.0, introduced significant project planning and progress tracking features.²³

TMS is an online repository of documentation for Bible translation projects of the United Bible Societies. It is set up to store data about the project and its situation, its Translation Needs Assessment, its Translation Brief, some stakeholder or partner

¹⁸ Cook, *Just Enough*, 43, and Kathy Schwalbe, *An Introduction to Project Management*, fifth edition (Minneapolis, MN: Schwalbe Publishing, 2015), appendix A, sec. Introduction, para. 1.

¹⁹ "Paratext 8," accessed May 20, 2018, <https://pt8.paratext.org/>.

²⁰ "Translation Publishing and Management System," accessed May 20, 2018, <https://tms.biblesocieties.org/>.

²¹ Some Bible translation organizations use Google software instead for standard office tasks including contact management. Other Bible translators may prefer LibreOffice. I will assume that all these office suites have approximately the same features for the sake of this evaluation.

²² "Features", accessed June 14, 2018, <https://pt8.paratext.org/features/>.

²³ The project management features of ParaText 8 are described in detail in Doug Higby and Jeff Shrum, "Paratext 8: Project Management Where You Need It Most," paper presented at Bible Translation 2017, Dallas, Texas, USA, October 13–17, 2017.

information, a list of project personnel and their roles, reports from consultants and others who interact with the project, and data about project progress and current status. TMS is accessed through a web browser.

The Seed Company's Planning and Progress (P&P) tool is a Microsoft Excel spreadsheet, used, as its name implies, to formulate a plan and to record progress in a Bible translation project. The planning table tracks number of project personnel, pace of translation work, and expected progress in terms of which Bible books will be brought through which stages in the translation project in which years. It uses calculations involving the relative amount of time each stage of the project can take and the relative difficulty of each Bible book to indicate whether a team might be planning more work than they can realistically accomplish in a given year. It also records progress in terms of how many verses were taken through which stages in which quarter of each year, and plots a graph of actual progress compared to planned progress.

For the purposes of this evaluation, Microsoft Office was chosen as a representative suite of standard office software. In terms of features useful in Bible translation projects and in particular in the management of such projects, Microsoft Office and alternative office suites are assumed to be approximately equivalent.

In addition to these software tools, programs with specialized project management features are also candidates for this evaluation. Marmor and Bartels recommend GanttProject as a simple, free tool for creating Gantt charts.²⁴ GanttProject stores basic data on project personnel (name, contact information, rate of pay), and facilitates the creation of a hierarchical task list. Tasks can be assigned beginning and end dates or

²⁴ Marmor & Bartels, *Managing language programs*, 325; "GanttProject: Free Desktop Project Management App," accessed June 14, 2018, <https://www.ganttproject.biz/>.

beginning date and duration, relationships to predecessor tasks, resources, priority, and task progress can be recorded. This information is automatically used to create a Gantt chart beside the task list, which can be exported in PDF or HTML format.

SmartSheet was included along with these tools, because of reports that some Bible translation project managers have found it useful.²⁵ SmartSheet was designed to combine features of Microsoft Excel and Microsoft Project.²⁶ SmartSheet is accessed through a web browser. It has templates for many different business-related applications. Relevant to project management, its basic project with Gantt timeline is similar to GanttProject: a task list and resource list are used to create a Gantt chart. Other project management tools such as a stakeholder register can be added to this. Spreadsheets are well known for their flexibility: they can be used to record and analyze many kinds of data. SmartSheet builds on this by adding project management configurations without sacrificing that basic flexibility.

As discussed in chapter 3, Microsoft Project is the industry leading project management program. The first version of Microsoft Project was released in 1984, and development has continued ever since with new releases every few years.²⁷ Like SmartSheet, Microsoft Project comes with a number of different templates for standard project configurations. Its task list interface is the same as that described for GanttProject and SmartSheet: a task list beside a Gantt chart. A project's other data, such as its

²⁵ Personal communication; "Smartsheet: Work Different," accessed May 20, 2018, <https://www.smartsheet.com/>.

²⁶ Karsten Strauss, "Former Microsoft Analyst Wants To Disrupt MS Excel, Project," *Forbes*, March 12, 2013, accessed May 20, 2018, <https://www.forbes.com/sites/karstenstrauss/2013/03/12/former-microsoft-analyst-wants-to-replace-ms-excel-project/>.

²⁷ *Wikipedia*, s.v. "Microsoft Project," accessed July 19, 2018, https://en.wikipedia.org/wiki/Microsoft_Project.

resource list, are displayed in other formats. It also contains customizable dashboards and other reporting features.

In addition to these programs, one representative of the vast array of other project management software tools was chosen for evaluation as well: Zoho Projects,²⁸ chosen because it ranked first in *PC Magazine*'s latest review of project management software.²⁹ Like TMS and SmartSheet, Zoho Projects is accessed through a web browser. Its default task list does not contain a Gantt chart, though a Gantt chart is available as a report it can generate. It also contains a news feed of project activity, a repository for project documentation, chat and forum sections to facilitate communication within the project team, and issue tracking features.

²⁸ "Online Project Management Software - Zoho Projects," accessed May 20, 2018, <https://www.zoho.com/projects/>.

²⁹ Jill Duffy, "The Best Project Management Software of 2018," *PC Magazine* (May 8, 2018), accessed May 20, 2018, <https://www.pcmag.com/article2/0,2817,2380448,00.asp>.

CHAPTER FIVE

RESULTS

The goal of the present thesis-project is to formulate recommendations concerning the use of software to facilitate the management of Bible translation projects. This chapter presents the results of the evaluation carried out according to the project design discussed in chapter 4. The results are discussed category-by-category through the six components of Bible translation project management which were identified in chapter 4 as desirable to be facilitated by software other than a web browser or word processor, namely:

1. Contact management
2. Spreadsheet
3. Task list
4. Schedule
5. Progress tracking
6. Reporting and report management

This is followed by the results of the evaluation of a seventh category (“other”), which consists of cost, ease of use, and quality of documentation. The analysis of the results of the evaluation is followed by summary comments, specific recommendations, and a discussion of the limitations of the present study.

Evaluation Results

The results of the evaluation are presented and discussed category-by-category. The complete assessment tool with results is given in appendix 2.

1. Contact Management

	ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Totals:	9	9	5	21	16	22	22	22
1.1. Record name, contact info, notes about contacts	1	1	1	5	4	4	5	2
1.2. Associate multiple notes with each contact	1	1	1	3	1	4	4	5
1.3. Group contacts	1	1	1	5	1	4	5	5
1.4. Assign project roles to contacts	5	5	1	3	5	5	3	5
1.5. Record interactions with contacts	1	1	1	5	5	5	5	5

The programs assessed divide fairly clearly into those that have contact management features and those that do not. Microsoft Office, Microsoft Project, and SmartSheet all provide functions to store basic contact information, to record notes about contacts, to group the contacts, to assign project roles to contacts, and to keep notes on interactions with contacts. Zoho Projects itself only facilitates the storage of contact names and e-mail addresses, but another Zoho product, Zoho Books, provides more extensive contact management features.¹ So as not to penalize Zoho Projects for this situation, the score of 2 on attribute 1.1 *Record name, contact info, notes about contacts* reflects Zoho Projects itself, and the remaining scores in the category reflect the capabilities of Zoho Books. Zoho provides a number of products which can work together, and it may be that an organization would choose to make use of a number of these rather than just Zoho Projects alone. More will be said about this below.

The other software tools in this evaluation do not facilitate contact management. The P&P tool contains none of these functions, and ParaText and TMS allow the

¹ “Contact, Customer and Vendor Management | Zoho Books,” accessed July 25, 2018, <https://www.zoho.com/books/accounting/contact-management.html>.

assignment of project roles to people but otherwise have no contact management features. GanttProject facilitates only rudimentary contact management.

The role management features of ParaText deserve further comment. ParaText allows a project manager to give project members the permission to view, comment on, or edit any selection of biblical books or chapters. The new project planning features of ParaText 8 allow the granting of editing permission right in the project's task list: when a task which is set as requiring editing is assigned to a person, that person is automatically given permission to edit the chapters or books for which they are assigned to do that task. In any Bible translation project already using ParaText, this feature facilitates Bible translation project management to such a degree as to commend its use regardless of the rest of the results of this evaluation and any organization's or project manager's decisions regarding other software choices.

2. *Spreadsheet*

	ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Totals:	4	8	8	20	4	20	18	17
2.1. Link to external spreadsheets	1	5	1	5	1	5	5	5
2.2. Import spreadsheet	1	1	1	5	1	5	5	5
2.3. Spreadsheet functionality built-in	1	1	5	5	1	5	3	5
2.4. Produce reports in spreadsheet format	1	1	1	5	1	5	5	2

Spreadsheets are useful in so many project management tasks that even specialized software can only incorporate or augment, but not replace, their functionality. Microsoft Office (in particular, Excel) and SmartSheet are the clear favorites in this category. SmartSheet was designed to combine features of Microsoft Excel and Microsoft

Project,² and as will become clear below, this evaluation suggests that it has succeeded. Microsoft Project interfaces with Excel but does not contain extensive spreadsheet functionality itself, though it does facilitate the production of a budget by automatically summing up the costs of sub-items in the project's work breakdown structure (hierarchical task list). Zoho Projects does contain some built-in spreadsheet functionality but only produces PDF reports. If an organization's accounting department or a Bible translation project's funding partners require financial reports from the project manager in spreadsheet format, as is not uncommon, this would count against Zoho Projects.

The P&P tool itself is an Excel spreadsheet, but can only be integrated with other project documentation by simple inclusion along with other files; it has no facility to incorporate or reference other project documents itself. Project documents in spreadsheet format can be uploaded into TMS, but not imported, and although TMS does produce some reports in spreadsheet format, the criterion for attribute 2.4 *Produce reports in spreadsheet format* specifically concerns the software's ability to produce financial reports in custom spreadsheet formats for interface with different organizational accounting systems.

ParaText and GanttProject both provide no spreadsheet functionality.

² Karsten Strauss, "Former Microsoft Analyst Wants To Disrupt MS Excel, Project," *Forbes*, March 12, 2013, accessed May 20, 2018, <https://www.forbes.com/sites/karstenstrauss/2013/03/12/former-microsoft-analyst-wants-to-replace-ms-excel-project/>.

3. Task List

	ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Totals:	24	6	13	21	26	29	30	26
3.1. Create task list	5	1	2	3	5	5	5	5
3.2. Assign personnel to tasks	5	1	1	3	5	5	5	5
3.3. Assign non-personnel resources to tasks	1	1	1	3	1	4	5	1
3.4. Task durations	3	1	3	5	5	5	5	5
3.5. Task dependencies	5	1	1	2	5	5	5	5
3.6. Team members can view their own tasks	5	1	5	5	5	5	5	5

The centrality of the task list to the management of Bible translation projects is evident from the frequency of its mention in the Bible translation literature discussed in chapter 3. Even two of the three Bible-translation-specific programs under evaluation contain some functions related to the task list. Only TMS lacks task list features; instead, it provides a four-stage framework for projects which allows the project manager to plan and track percentage completion of each stage for each book.³

The P&P tool likewise specifies stages and allows the project manager to adjust the amount of total project time spent in each category of task, but otherwise has no flexibility with regard to the task list.⁴ Microsoft Office may be used to create a task list only because of its flexibility as a suite of standard office software, but any integration between the task list and resources list, schedule, or budget would be cumbersome to implement.

³ The four stages are drafting, internal review, external review, and final review, as in the UBS base plan template in ParaText 8.

⁴ The stages in the P&P are: exegesis & first draft, team check, community testing, back-translation, consultant check, and publication.

The task list in ParaText is useful and facilitates certain aspects of Bible translation project management: it allows project managers to create a task list identical to or customized from templates from UBS, SIL, and the Seed Company, or to create their own task list. It only allows two hierarchical levels: stages and tasks. Other kinds of projects may benefit from a work breakdown structure with more levels, but these two levels are standard for Bible translation projects. The only shortcomings of ParaText's task list, in terms of this section of the evaluation, are that although target completion dates can be set for each stage, individual tasks cannot be assigned durations, and only personnel can be assigned to tasks, but non-personnel resources cannot be.

The other four software packages, designed for project management in general, produce Gantt charts and schedules in other formats based on data in the task list. GanttProject, SmartSheet, and Microsoft Project display a Gantt chart alongside the task list by default, as in figures 5.1, 5.2, and 5.3, respectively.

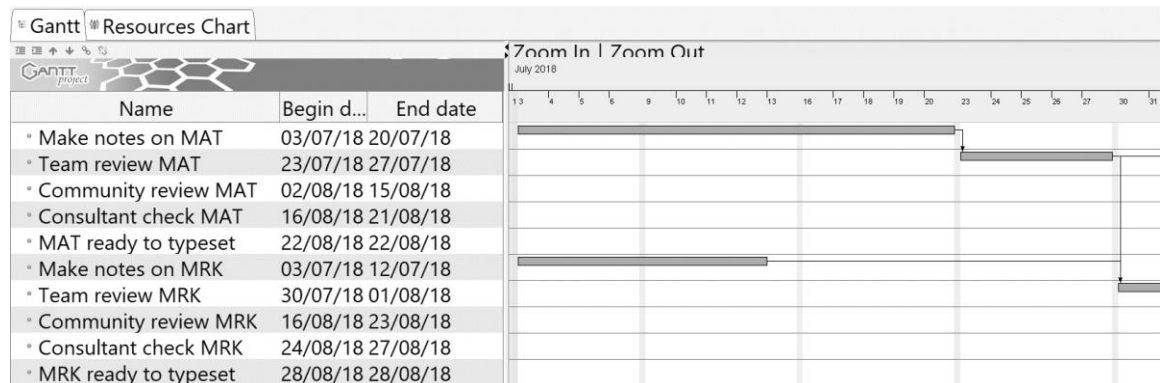


Figure 5.1. Task list and Gantt chart in GanttProject

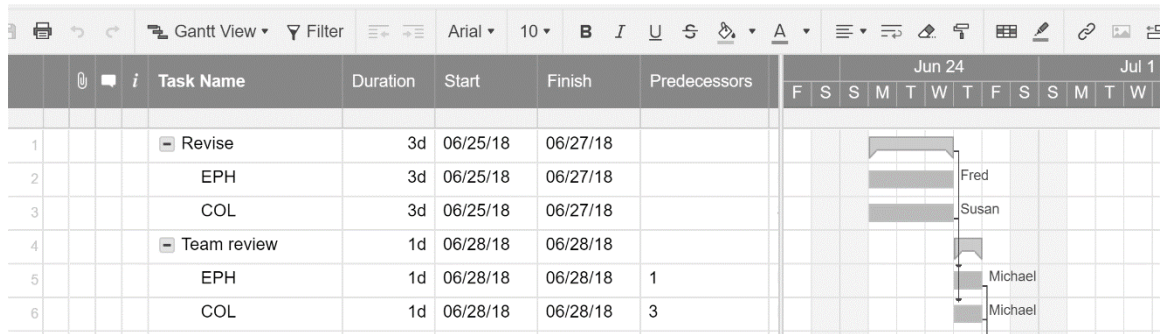


Figure 5.2. Task list in Gantt view in SmartSheet

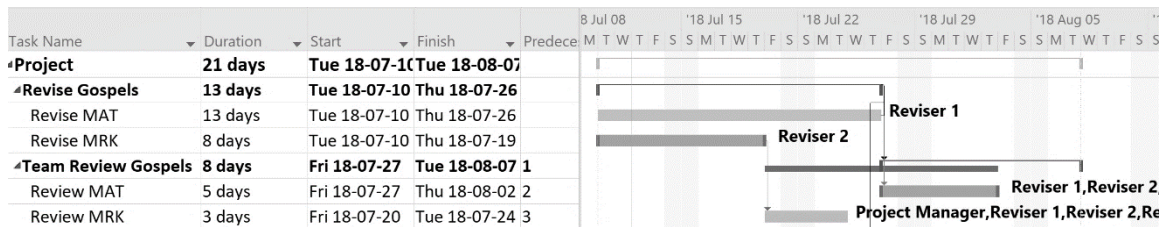


Figure 5.3. Task list in Gantt view in Microsoft Project

If a project manager wants a robust task list, Microsoft Project is the only program that scored full marks in this evaluation, with SmartSheet a close second. SmartSheet lacks the ability to assign non-personnel resources, such as equipment or a budget, to a task. A column can be added in a SmartSheet project to provide this feature, but SmartSheet does not by default make allowance for non-personnel resources. This same feature is missing from GanttProject, which is not flexible enough to allow the user to work around this shortcoming.

4. Schedule

	ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Totals:	4	4	4	11	20	20	20	16
4.1. Calculate critical path	1	1	1	2	5	5	5	1
4.2. Produce schedule from task durations and dependencies	1	1	1	2	5	5	5	5
4.3. Schedule tasks by day, week	1	1	1	5	5	5	5	5
4.4. Schedule time off, weekends, holidays	1	1	1	2	5	5	5	5

GanttProject, Smartsheet, and Microsoft Project fully implement the desired scheduling features; ParaText, TMS, and P&P fully do not. Microsoft Office again has the flexibility to be used for these functions to some degree or another. Zoho Projects currently lacks only the ability to calculate the critical path, and Zoho reports that “the Critical Path Method functionality will be rolled out in Q3 of 2018.”⁵

Again because of its ubiquity in Bible translation projects, ParaText deserves further comment. ParaText’s task list has the foundations for detailed scheduling features, but does not contain sufficient functionality to produce a Gantt chart, for example. Tasks can be set as dependent on each other, so that, for example, back-translation cannot begin until external (community) review is finished. And this dependence can be set to either the chapter level or the book level: an exegetical review of a chapter might begin after that chapter has been drafted but before the entire book’s draft is finished. As discussed above, each task can be assigned to a team member. As far as task durations are concerned, a pace, in terms of expected number of verses per day, can be set for each task, and target completion dates can be set for each stage, but ParaText does not synthesize this information to produce a project schedule. The closest it comes is a “forecast line chart,” which plots an expected rate of progress, based only on a final expected completion date, against task completion data to show whether the project is on schedule or not, as in figure 5.4. The forecast is, of course, only as good as the data upon which it is based, which depends on the team or project manager tracking progress accurately.

⁵ “Critical Path,” accessed July 25, 2018, <https://help.zoho.com/portal/community/topic/critical-path>

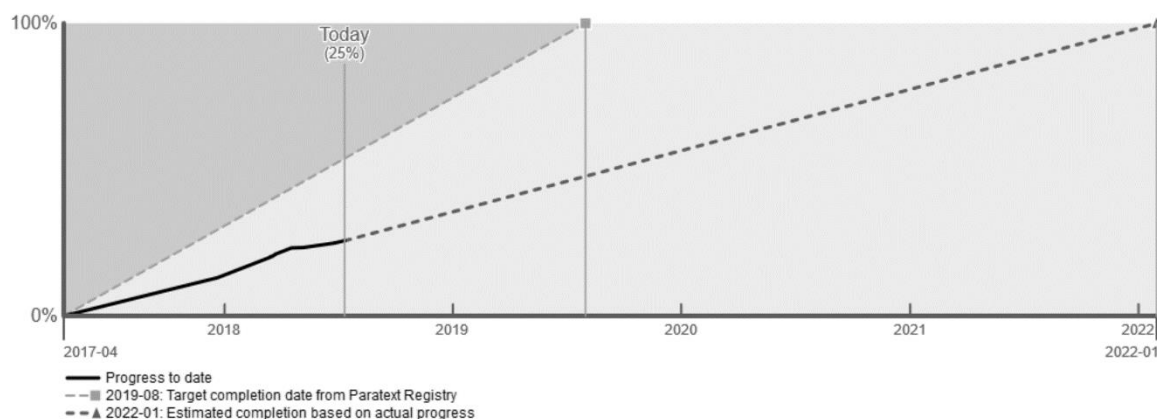


Figure 5.4. Forecast line chart from ParaText 8.0

5. Progress Tracking

	ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Totals:	13	13	13	25	13	25	21	19
5.1. Track expenses	1	1	1	5	1	5	5	2
5.2. Support multiple currencies, exchange rates	1	1	1	5	1	5	1	5
5.3. Store receipt images	1	1	1	5	1	5	5	2
5.4. Track task completion	5	5	5	5	5	5	5	5
5.5. Track partial task completion (e.g., % complete)	5	5	5	5	5	5	5	5

Project management is concerned with monitoring and controlling the project cost, schedule, and scope. Attributes 5.1–5.3 are relevant to cost management, and attributes 5.4 and 5.5 are relevant to schedule management. All of the programs tested equally facilitate the tracking of task completion, at least within the limitations imposed by their task list functionality, discussed above.

ParaText, TMS, P&P, and GanttProject provide no features related to expense tracking. Zoho Projects itself does not either, but other Zoho products such as Zoho Books and Zoho Invoice provide these features. Microsoft Project can be used for expense tracking as long as the project only works in a single currency. It is not

uncommon for Bible translation projects to need to budget in a local currency and then convert their budgets to US dollars or Euros for the sake of funders. Expenses might be paid in local currency, but then have to be converted to match the funder's preference on financial reports. For these reasons, a program's ability to work in multiple currencies will be important to some Bible translation project managers. Microsoft Office and SmartSheet are both flexible enough to facilitate this.

6. *Reporting and Report Management*

	ParaTExt	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Totals:	8	8	8	17	8	20	20	13
6.1. Report on actual expenses vs. budget	1	1	1	4	1	5	5	2
6.2. Report on actual progress vs. schedule	5	5	5	4	5	5	5	5
6.3. Produce or store custom reports	1	1	1	5	1	5	5	1
6.4. Customizable project dashboard	1	1	1	4	1	5	5	5

Besides attribute 6.2 *Report on actual progress vs. schedule*, which all of the software in this evaluation can facilitate, there is a clear divide between the Bible translation software and GanttProject on the one hand, which lack these functions, and the general project management programs on the other hand, which include these functions. As mentioned above, Zoho Projects alone cannot facilitate expense monitoring, but other Zoho products do provide the required features.

As we have seen already, Microsoft Office may not specifically provide project management functions, but it is flexible enough to facilitate these tasks.

7. Other

	ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Totals:	15	10	11	15	12	12	10	10
7.1. Cost	5	5	5	5	5	2	2	1
7.2. Ease of use	5	4	4	5	4	5	4	4
7.3. Quality of documentation	5	1	2	5	3	5	4	5

The score of 5 on attribute 7.1 *Cost* for ParaText, TMS, P&P, Microsoft Office, and GanttProject indicates that the programs are either free or assumed already to be in use in Bible translation projects. SmartSheet, Microsoft Project, and Zoho Projects all have monthly fees associated with their use, and because much Bible translation work is funded by donations, this may turn out to be a significant factor affecting the adoption of these programs in Bible translation projects.⁶

Zoho Projects scored the lowest because its cost is the highest: to get integration with Zoho Invoice and Zoho Books, which, as discussed above, are required to provide some of the features under consideration, Zoho Projects costs \$40 per month,⁷ Zoho Books costs at least \$90/year,⁸ and Zoho Invoice has a free edition which appears to be sufficient, for a total of \$570/year. Zoho Projects allows 25 users at this price; this complicates the comparison. SmartSheet and Microsoft Project each have a per-user price, and Zoho Projects would end up being cheaper if a number of project managers, or an entire organization, were to look into licensing the software. For the purposes of this

⁶ Zoho Projects does have a free edition, but its limitations make it not useful for the tasks under consideration in this evaluation.

⁷ “Zoho Projects Pricing Plans: Free for 5 Users,” accessed July 25, 2018, <https://www.zoho.com/projects/zohoprojects-pricing.html>. All prices herein are given in US dollars.

⁸ “Pricing | Zoho Books,” accessed July 25, 2018, <https://www.zoho.com/books/pricing/>.

evaluation, I am considering the case of a Bible translation project manager who chooses to use project management software independently of any organizational decisions or software licensing agreements.

SmartSheet and Microsoft Project each scored 2 on attribute 7.1 *Cost* because their prices are comparable and less than Zoho's offerings. The Business edition of SmartSheet appears to be the appropriate version for the features in this evaluation; its cost is \$25/user/month.⁹ The Project Online Professional edition of Microsoft Project costs \$30/user/month.¹⁰

Scores on attribute 7.2 *Ease of use* cannot but be highly subjective. I found all of the programs more-or-less equally easy to use. Being familiar with standard project management processes from the *PMBok Guide* certainly helped with this. The programs I found the most intuitive were ParaText and Microsoft Office, perhaps because of years of familiarity with both of them, and SmartSheet. For the other programs, there were times during this evaluation that I could not easily figure out how to perform some operation and I needed to consult documentation.

Of the programs with sufficient documentation, i.e., those with scores of 4 or 5 on attribute 7.3 *Quality of documentation*, I experienced some difficulty finding what I needed in the documentation for Microsoft Project. In contrast, I found the documentation for ParaText, Microsoft Office, SmartSheet, and Zoho Projects to be clear and accessible. Of the other programs, TMS contains little documentation, P&P contains some instructions and examples, and help for GanttProject is provided through online

⁹ "Pricing | Smartsheet," accessed July 25, 2018, <https://www.smartsheet.com/pricing>.

¹⁰ "Compare Project Management Software | Microsoft Project," accessed July 25, 2018, <https://products.office.com/en-us/project/compare-microsoft-project-management-software?tab=1>.

forums only. I gave GanttProject a score of 3 because the online community seems quite active, so it could be that this form of documentation turns out to be sufficient for any given project manager.

Summary and Recommendations

	ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
Totals:	77	58	62	130	99	148	141	123
1. Contact management	9	9	5	21	16	22	22	22
2. Spreadsheet	4	8	8	20	4	20	18	17
3. Task list	24	6	13	21	26	29	30	26
4. Schedule	4	4	4	11	20	20	20	16
5. Progress tracking	13	13	13	25	13	25	21	19
6. Reporting and report management	8	8	8	17	8	20	20	13
7. Other	15	10	11	15	12	12	10	10

All else being equal, SmartSheet scored the highest on this evaluation, with Microsoft Project a close second. Microsoft Project out-performed SmartSheet in task list functionality, and the two programs were equally capable in terms of contact management, schedule, and reporting and report management. SmartSheet scored higher than Microsoft Project in terms of spreadsheet functionality, progress tracking, and the other considerations, namely ease of use and quality of documentation, as discussed above. SmartSheet had no score of 1 on the evaluation, and Microsoft Project had one: its inability to work in multiple currencies seems to me like a barrier to its adoption in Bible translation projects. Both programs only had one score of 2: their costs are comparable and not negligible, which, as discussed above, might be significant for some Bible translation projects.

The only other software package under consideration which was designed specifically for project management, Zoho Projects, did not score high enough to commend its use in Bible translation projects. If a Bible translation project manager is looking for specialty software to use to facilitate the management of Bible translation projects, the results of this study are that SmartSheet is most highly recommended.

As discussed in chapter 3, a more measured solution to the need for software to facilitate Bible translation project management would look first to software already in use in a project or organization, and augment this with specialized tools in as simple a way as possible. As can be seen in the scores above, the combination of ParaText and an office suite like Microsoft Office comes close in functionality to the project management programs, except in terms of scheduling features. The main shortcomings of this combination are related to the production of a schedule from information in the task list. Echoing the recommendation by Marmor and Bartels, the results of this study commend the free program GanttProject as a useful tool in this regard.¹¹ In fact, calculating a score for this combination by taking the highest score on each attribute for the three programs results in a total of 149, comparable to the score for SmartSheet.

Limitations

The main contributions of the present thesis-project to the practice of Bible translation are the highlighting of deficiencies in discussions of project management in the Bible translation literature in comparison with the general project management literature in chapter 3, the analysis of Bible translation project management processes and identification of areas which are amenable to facilitation by software in chapter 4, and the

¹¹ Thomas Marmor and Eric Bartels, *Managing Language Programs: Perspectives, Processes, and Practices*, Pike Center for Integrative Scholarship (Dallas: SIL International, 2017), 325.

evaluation of these particular software packages, as reported in the present chapter. Still, there are reasons why this study cannot be considered the final word on software for Bible translation project management.

The analysis of Bible translation project management processes may not reflect the circumstances of every Bible translation project or departmental or organizational context. Different processes could impose different requirements upon software.

Organizational, departmental, or project-specific requirements for reporting could constrain the choice of software in ways not envisioned in the present study. For example, some projects are required to use TMS or P&P. Although those two tools did not score highly in terms of this evaluation, they were designed to meet particular needs, and they could well be exactly the right tools to use in certain contexts.

The evaluation of software attributes in category 7 *Other* is highly context-specific. In terms of cost, because some Bible translation projects have significantly limited budgets, cost might be the most important factor in some contexts. Cost could be relevant to the point where only free software would be considered in addition to the software already in use in the project. Furthermore, as mentioned above, ease of use is a highly subjective quality, and assessments by other users would most likely not match the assessments in this evaluation. Likewise, there is subjectivity in the assessment of the quality of a program's documentation.

Internet connectivity could be a significant factor in some projects. TMS, SmartSheet, and Zoho Projects are accessed through a web browser and are only available online.

There are dozens of other programs which could have been selected for evaluation in this study. As mentioned in chapter 4, Zoho Projects was chosen as a representative of many other software packages, yet those other packages almost certainly offer different functionality or provide similar features in different ways. Perhaps some program not selected for evaluation is even better suited to Bible translation project management than the programs considered in this study.

Finally, software is constantly under development, and it would not be surprising if new versions of these programs score differently than the current versions.

APPENDIX ONE

TRANSLATION BRIEF

In translation studies, a translation brief documents the scope of a translation project.

In an ideal case, the client would give as many details as possible about the purpose, explaining the addressees, time, place, occasion and medium of the intended communication and the function the text is intended to have. This information would constitute an explicit translation brief (*Übersetzungsauftrag*). ... The translation brief specifies what kind of translation is needed.¹

Not all Bible translation organizations use a translation brief. The United Bible Societies provides the following template for a translation brief.

Date prepared	
Prepared by	

A. Principles

Goal	Final product (e.g. OT?, NT?, Full Bible?, individual books?) and Target Audience (e.g. Church(es), Youth, Deaf Community, Non-church readers, etc. ...), If needed: Name age group and/or level of education
Type of translation	Interconfessional?, Liturgical?, Literary?, Missionary? Formal?, Dynamic?, Idiomatic? Easy language? Concordant or not?: Choose any of these or add other terms to describe the new translation
Position among existing translations	Name(s) of other translations in the language, [Explain how the translation will be complementary to existing translations in this language or in the dominant language]
Choice of canon and/or translation base	If needed: which canon (deuterocanonical books)? Edition(s) on which the new Translation will be based: e.g. <i>Biblia Hebraica Stuttgartensia</i> 4 (or 5), Greek New Testament 5, <i>Novum Testamentum Graece</i> 28, a standard translation, or any other ...
Model translations	If needed: name(s) of model translations that will be used for consultation
Communication during translation process	E.g.: Translation committee(s), contact with (Church) community/communities for feedback?, pre-publications in print or on internet with possibilities for feedback?, community building through Facebook or Bible Society website? ...

¹ Christiane Nord, *Translating as a Purposeful Activity: Functionalist Approaches Explained* (Manchester, UK and Kinderhook, NY, USA: St. Jerome Publishing, 1997), 30.

Copyright and publisher(s)	
Planned editions	E.g. standard edition in print? With/without deuterocanonical books? Special edition(s) e.g. with special lay-out, cover, or without verse numbers? Internet/app/e-reader? Video (for Deaf Communities) ... etcetera

B. Stages, team members, and agencies

Team procedures	Describe team procedures and the stages in which the project will be set up and the tasks of each type of team member
Team members	translators, reviewers, project coordinator, GTA/consultant, ICAP support, etc. ...
Participants and agencies	Bible Society/ies, partner agencies, churches, funders, etc. ...

C. Translation issues

Language issues	e.g. national versus regional language, orthography and spelling, use (or not) of traditional language, handling of proper names etc. ...
Translation issues	e.g. length of sentences and/or of paragraphs, paragraph headings, handling of traditional terminology, key-terms, textual problems etc. ...
Extra materials	e.g. footnotes, introductions, glossary, timelines, maps, pictures, cross references, etc. ...

APPENDIX TWO

SOFTWARE EVALUATIONS

Bible translation project management software evaluation tool

Attribute	Criteria	Evaluation							
		ParaText	TMS	p&p	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
1. Contact management		9	9	5	21	16	22	22	22
1.1. Record name, contact info, notes about contacts		1	1	1	5	4	4	5	2
1.2. Associate multiple notes with each contact		1	1	1	3	1	4	4	5
1.3. Group contacts		1	1	1	5	1	4	5	5
1.4. Assign project roles to contacts		5	5	1	3	5	5	3	5
1.5. Record interactions with contacts		1	1	1	5	5	5	5	5
2. Spreadsheet		4	8	8	20	4	20	18	17
2.1. Link to external spreadsheets		1	5	1	5	1	5	5	5
2.2. Import spreadsheet		1	1	1	5	1	5	5	5
2.3. Spreadsheet functionality built-in		1	1	5	5	1	5	3	5
2.4. Produce reports in spreadsheet format		1	1	1	5	1	5	5	2
3. Task list		24	6	13	21	26	29	30	26
3.1. Create task list		5	1	2	3	5	5	5	5
3.2. Assign personnel to tasks		5	1	1	3	5	5	5	5
3.3. Assign non-personnel resources to tasks		1	1	1	3	1	4	5	1
3.4. Task durations		3	1	3	5	5	5	5	5
3.5. Task dependencies		5	1	1	2	5	5	5	5
3.6. Team members can view their own tasks		5	1	5	5	5	5	5	5
4. Schedule		4	4	4	11	20	20	20	16
4.1. Calculate critical path		1	1	1	2	5	5	5	1
4.2. Produce schedule from task durations and dependencies		1	1	1	2	5	5	5	5

Bible translation project management software evaluation tool

Attribute	Criteria	Evaluation							
		ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
4.3. Schedule tasks by day, week		1	1	1	5	5	5	5	5
4.4. Schedule time off, weekends, holidays		1	1	1	2	5	5	5	5
5. Progress tracking		13	13	13	25	13	25	21	19
5.1. Track expenses		1	1	1	5	1	5	5	2
5.2. Support multiple currencies, exchange rates		1	1	1	5	1	5	1	5
5.3. Store receipt images		1	1	1	5	1	5	5	2
5.4. Track task completion		5	5	5	5	5	5	5	5
5.5. Track partial task completion (e.g., % complete)		5	5	5	5	5	5	5	5
6. Reporting and report management		8	8	8	17	8	20	20	13
6.1. Report on actual expenses vs. budget		1	1	1	4	1	5	5	2
6.2. Report on actual progress vs. schedule		5	5	5	4	5	5	5	5
6.3. Produce or store custom reports		1	1	1	5	1	5	5	1
6.4. Customizable project dashboard		1	1	1	4	1	5	5	5
7. Other		15	10	11	15	12	12	10	10
7.1. Cost	5: free or assumed already to be in use in the organization or project 4: one-time or yearly cost not more than \$120 ² 3: one-time or yearly cost greater than \$120, up to \$240	5	5	5	5	5	2	2	1

² All prices herein are given in US dollars.

Bible translation project management software evaluation tool

		Evaluation							
Attribute	Criteria	ParaText	TMS	P&P	MS Office	GanttProject	SmartSheet	MS Project	Zoho Projects
7.2. Ease of use	2: one-time or yearly cost greater than \$240, up to \$360								
	1: one-time or yearly cost greater than \$360								
7.3. Quality of documentation	5: Highly intuitive								
	4: Most functions intuitive; others easy to learn to use								
	3: Some functions intuitive; some not easy to learn to use	5	4	4	5	4	5	4	4
	2: Many functions not intuitive								
	1: The use of even basic functions is unclear								
	5: Documentation is thorough, clear, and accessible								
	4: Documentation generally has two of these three qualities: thorough, clear, accessible								
	3: Documentation generally has only one of these three qualities: thorough, clear, accessible	5	1	2	5	3	5	4	5
	2: Documentation limited to basic instructions and/or examples								
	1: Program contains little to no documentation								
Total scores:		77	58	62	130	99	148	141	123

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